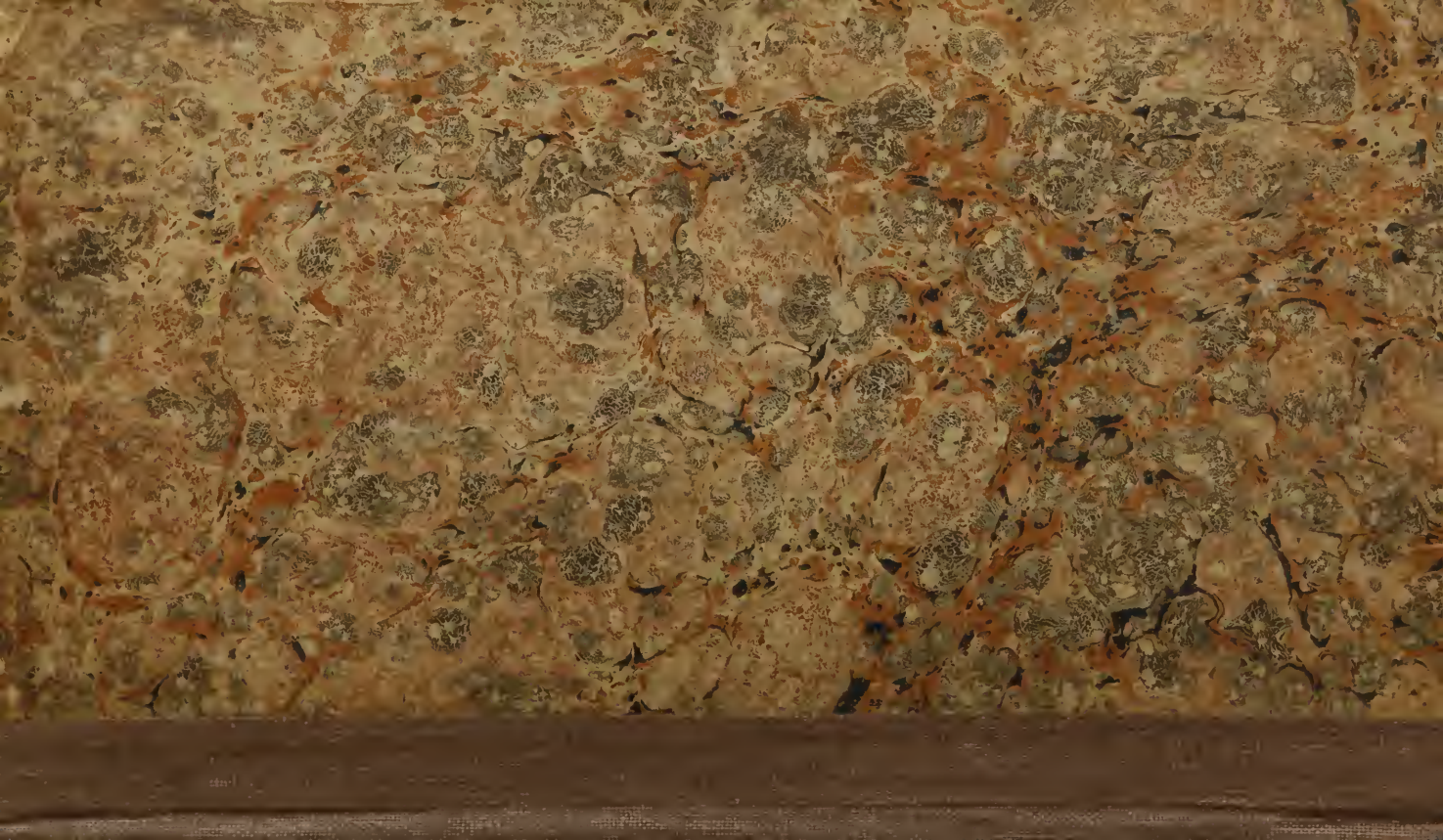

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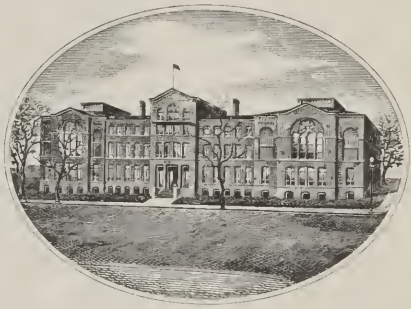

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Public Health Service

AN ESSAY

ON THE

MANAGEMENT

AND

FEEDING OF INFANTS.

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AN ESSAY

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VARIOUS, as the climates which they inhabit, are the customs of the several inhabitants, in the ceremonies, dress, and management of their young children; some of which are consistent with, and properly adapted to, the respective climates and other natural and occasional contingencies; and others depend altogether upon the customs and manner of the inhabitants, many of which are as inconsistent and preposterous in their manner as they are obscure in their date and origin. Superstition and error being the offspring of ignorance, they are commonly found attached and proportioned to each other, and must prevail in the uncivilized and unenlightened countries of the world, whose inhabitants are entirely, or chiefly, governed and directed by custom and prejudice; their own uncultivated reason being a source from whence they can procure very little assistance, and which they seldom have recourse to.—As the manners and sentiments of mankind become enlarged and refined

by unlimited intercourse, and an emulous exertion in the pursuit of knowledge, the delusive shadows of ignorance disappear, and are supplanted by a knowledge erected upon the more immutable and permanent basis of rational consistence, and palpable conviction: hence we find, that fewer of the gross absurdities of the less civilized countries prevail in this: yet, as knowledge, of every kind, must be acquired, and is not a natural gift, (whatever the capacity for obtaining it may be) we must expect, now and then, to meet with those, even in this enlightened age and country, who, from a want of opportunity of being properly informed, have been early attached, and continue prejudiced, to particular forms and ways of reasoning, the absurdity of which they cannot readily divest themselves of.

A child, upon its entrance into the world, undergoes a great many changes; and those so sudden and material, that it seems a matter of some surprise greater numbers do not perish at that period. The changes, which may be considered of the most importance, are those which are produced by, and proceed from, the action of the *air;* as it affects the lungs, in breathing; and the surface of the body, by its coldness. No human being could, at any other period, undergo so sudden and extraordinary a change, and degree of heat and cold, without the most immediate and fatal consequences.

The breathing is an operation entirely new, and is, for the most part, performed instantaneously; as the lungs, which are the immediate organs, and destined solely to the purpose, of respiration or breathing, are inactive and useless before birth. This operation of breathing is commonly at first so laborious and difficult, and effected in so short a space of time, that a child at this time undergoes a great deal of pain and fatigue, as is discovered by his fretfulness and uneasiness, and the laborious heavings and pantings of the breast: for the lungs, not being before accustomed to their office, are sometime before they become reconciled to the effect of the cold air upon them, and are properly distended and fitted for it.

These considerations are here premised, with a view of pointing out the propriety and necessity of doing all in our power to assist and enable the child to encounter these difficulties. The means are simple and obvious, and such as are generally practised, in part.

A piece of new flannel, commonly known by the name of *receiver*, is very properly made use of to wrap the child in before he is dressed; in which situation he ought to continue, very closely covered up, with the mouth and nose scarcely exposed, upon the knee of some attendant, within the air of the fire, in a room apart from the mother,

if convenient, to prevent her being disturbed or over-heated, for a quarter or half an hour; by which means the child will be, in part relieved from the first shock of the cold air upon his body, and become more gradually accustomed to the feel and effect of it, and will also have time given him to recover from the fatigues invariably attending his sudden change of situation. These considerations are seldom so strictly attended to as they should be, and particularly the last; as it is very usual with nurses to hurry on the children's clothes as soon as possible, without allowing them the least respite. No bad consequence in the smallest degree can attend a little delay, if the child is kept well covered and warm; and his being settled and composed before he undergoes the hurry and fatigue of dressing, must be not only comfortable to him, but also highly proper and necessary.

A child, from the sudden effect and impression of the cold air, is very liable to take cold at the time of his birth, from which he does not always readily recover, and which oftentimes is the cause of tedious, troublesome, and dangerous complaints; as a cough and stuffing at the breast, the gripes with looseness, sore eyes, a stoppage in the nose which proves very teazing and troublesome to him in sucking, &c. it is therefore of great consequence to take particular care, at this juncture, to avoid

exposing the child to the cold air before he be dressed.

So liable are children to take cold before they are dressed, and in dressing, that I believe 'tis scarce possible, by any art that can be used, to prevent it entirely, in the colder seasons in this climate. This however has been a circumstance little understood or attended to. But were parents, and others concerned, sufficiently aware of its importance, they would cause more particular regard to be paid to it, especially when they are informed that a child's future health, thriving, and even constitution may be affected by it; and that the many restless nights and tedious days, which so many children have after birth, from griping and other causes, may be occasioned by that single unthought of circumstance.

During this interval, (viz. the time betwixt the birth and dressing) it is very common to give the child something: the intention of which seems originally to have been with a design of clearing the mouth and throat from phlegm, which some children have at that time, and which is discovered by a rattling in the throat in taking the breath, and that even sometimes to such a degree as to appear alarming, although it is seldom or never in itself dangerous: for this purpose, butter and sugar, mixed together, is sometimes forced into his mouth,

which being a very nauseous mixture, generally occasions a sickness, by which the phlegm is brought up: but as sickness at this time, will add to the fatigue, and may sometimes hurry a weak child, it is advisable to avoid it: a little sugar, dissolved in water, or molasses and water, given gradually in a tea-spoon, will dislodge and wash down the phlegm; and as it does not occasion sickness, must be more pleasant and palatable; as children, even so early, have the sense of taste more perfect than might be supposed by a comparison with the other senses, as the sight, hearing, &c. and it seems a piece of wanton cruelty, in our first office to them, to give them so disagreeable a salute, especially when it may more properly be avoided. When, therefore, the breathing is *tolerably* free, it will be advisable not to give any thing; as what is so given can answer no purpose, nor have any use. But when the rattling in the throat is urgent, and the breathing difficult, a little of the sugar or molasses and water may be given, which will generally clear the throat sufficiently.

DRESS.

New-born children are always (or ought to be) washed before they are dessed; and which is almost universally done, in all seasons, with *cold* water. It has been commonly said, that if cold

water is begun with, a child will never take cold afterward. The application of cold, however, in any shape, will, from what has just now been observed, be improper and certainly injurious, and is the principal occasion of stuffing at the breast, obstruction of the stomach, and the severe gripings, which new-born children so often experience.

But it will not only be an act of tenderness done the delicate, helpless, suffering infant, but also quite proper and necessary to have the water made warm (about the warmth of new milk) at first, increasing its coldness by degrees; so that in the course of a week or fortnight, according to the season of the year, it may be used quite cold, and continued so afterward; as the *advantages* of it will be then considerable. The advocates for the washing with cold water at the birth, seem to have derived their practice from the customs of other countries, as South America, Africa, and other warm climates; where it is not unusual to plunge both child and *mother* into cold water immediately after delivery. It may in those countries be salutary; but that is by no means a reason why the practice should apply here, or that it should be any guide to us: we had much better be directed by our own reason and experience; which appears to be the wish of the present time, as I find the best of the latest writers, who have occasion to name the subject, have concurred with me in the opinion of using *warm* water

on this occasion; although it is a practice not yet much adopted by nurses; but whose prejudices will, it is to be hoped, subside in time when they come to be better informed.

Every part of the body and limbs ought to be washed, and wiped dry and clean with a towel; and great care should be taken not to leave any of the unctuous, slimy matter which is found sticking commonly very close on many parts of the body, particularly in the groins, in the armpits, behind the ears, in the folds of the neck and sides, in the hams, and between the toes, as it is the sole cause of the blisters, sores and troublesome discharge which those parts are so commonly attacked with a few days or a week after the birth, and which this complete *first* washing and cleaning only can prevent. This therefore becomes an object worthy attending to. I have seen children who have not been at all washed, or imperfectly so, nearly covered with festering sores, from that cause, which have been very troublesome and distressing; for where ever any part of that matter is left sticking to the skin, a painful sore commonly succeeds there. An obvious advantage in the use of *warm* water, is, that it will undoubtedly wash off this slimy matter more readily and perfectly than *cold* water.

In dressing a new-born child, and indeed ever afterwards, simplicity and ease should be consulted

and observed as much as possible: great care ought to be taken that no part of the body or limbs be tight bound, or closely confined by rollers or any part of the dress; as tight rolling and confining the limbs, which was formerly practised, must be very injurious, and must greatly impede and prevent the growth, strength and activity of the infant. If it should be urged, by some, that the tender frame of an infant requires to be particularly supported by rollers and bandages; it may be answered; that however plausible, the argument may, upon a superficial inquiry, appear in favour of tight rolling; experience, the most sure guide, convinces us, that children thrive much better without it, and are much more likely to be free from deformity; as the body and limbs, when at liberty and unfettered, are more likely to attain their natural shape and proportion, than by confining them to any particular position; it being well known that the bones of an infant are so pliant and flexible as to be capable of being moulded into different shapes by rollers and bandages.

A flannel roller, about four or six inches broad, is commonly rolled once or twice *moderately* tight, about the body, next the skin, upon the navel; and was originally and very properly designed to support the navel, to prevent a rupture in it, to which it is subject at that tender age, from causes both natural and accidental. A broad flannel roller,

over the shirt, loosely folding the body once or twice, is used by some nurses, and is very proper, as it keeps the child more regularly warm than any other form of dress could do, and answers every purpose of support very effectually, besides being easy and comfortable; but care should be taken, always to let it be put on loose enough. Those who are accustomed to children, will readily know when they are too tightly rolled, or confined in their dress; as they discover a particular kind of uneasiness, with a motion of their arms and body, seeming to struggle as if they wanted to disengage themselves from some incumbrance or oppression, attended with a continued restlessness and fretting. I have seen children in great pain and distress from this cause, as they were instantly relieved and perfectly at ease upon removing or loosening the dress. This caution in dressing is well worth attending to, as any part of the dress, if put on very tight, will prove very painful and distressing to the child, and is what often happens through thoughtlessness and want of care in servants who have the management of children, and who are very subject to commit this error, if they be not now and then looked after.

It does not appear necessary, in this place, to enter into a minute detail of the materials and composition of the dress of infants; they are much of the same quality throughout the country, among all

ranks and degrees of people. It may be sufficient to observe in general, that they should be light and warm; and that they ought to be dry and clean; for which purpose it will be necessary to renew and change them very frequently.——*Flannel*, very commonly, and properly, composes those parts of the dress which are next to the skin; the shirt excepted; and which it is better calculated to do than any thing else. New flannel is generally, and very justly, preferred, as being warmer and softer than that which has been sometime worn. It is easier, and less liable to give cold when wet by the child, than any thing else: and the gentle stimulus which it affords upon the skin, promotes circulation and perspiration there, which at that time are but imperfect.

The number of PINS used in the dress of a child is sometimes very great; but when *tapes* or *strings* can be substituted for them, they are much preferable. The *foundling dresses*, so called from being first invented at the *foundling* hospital, for the sake, no doubt, of convenience and despatch, are come much into use. They draw and tye with strings, and are otherwise so contrived, that very few pins become needful in putting them on. The advantages which attend a dress so contrived and put on, are considerable enough to recommend it. In the first place, the risque of pricking and wounding the tender bodies of children is avoided, which will

now and then happen, notwithstanding the utmost care and caution, where a great many pins are used: and secondly, the dress sits much easier and pleasanter, and is put on with more despatch and less fatigue to the child.—The FOUNDLING CAP is simple; and, when put on, has a neatness in it which surpasses all the studied and expensive finery that has ever yet been devised for that purpose; and which perhaps may be accounted for in conformity with the opinion a great many have, that a young child looks the best in its night-cap, which this resembles.

Quickness and despatch in dressing are proper to be observed, especially at the first, to avoid fatigue, but more particularly cold, and its troublesome and even dangerous consequences.

Warmth and rest are invariably requisite, cannot be too strictly enjoined, and ought to be inseparably connected during the month, or, more particularly, the first fortnight; during which period children should be indulged in them to the utmost, and should seldom or never be moved or disturbed, except to be fed, dressed, or cleaned.

The most convincing and satisfactory arguments in favour of uninterrupted and constant warmth and quiet are deducible, and may be gathered from the two following general observations which are to be made upon children:

1. A child, who thrives well, is naturally disposed to *rest* and *sleep*, and is fond of *warmth*; as appears by

2. A child, who is much disturbed, or exposed to the *cold air*, being more fretful and uneasy than when kept *still* and *warm*.

Thus nature dictates! and we need not a more sure and unerring guide to direct us, in this instance: for if nature or instinct, can, or will dictate, direct, or interfere at any period of our existence, it may reasonably be supposed to do it at that time when we are the least capable of directing or assisting ourselves.

Children never seem so easy, nor sleep so sound, as when they are close covered up in bed: and it would be no easy matter to suffocate a new-born child, although you wrap him up ever so close in the bed-clothes, so as apparently to exclude the external air from him, provided no violence is done by pressure upon his mouth and nose, or any other part of the body: so natural and desirable is warmth to an infant at this period.

Warmth should be as regularly and constantly supported as may be; 1st, by a moderate warmth of the room; out of which a child should be carried as seldom as possible, especially to any distant part

of the house. 2dly, by warm clothing; which, as before observed, should be light and sit easy, and changed or removed as often as it is wet or foul. It is scarcely necessary to observe, that a child ought to be always changed or dressed near the fire, during cold or cool weather; and for this purpose, a room immediately adjoining the mother, to prevent her being over-heated or disturbed, will be most advisable, when it is convenient to have it so. And 3dly, during the time of rest and sleeping.—Various kinds and forms of beds have been adopted for children to sleep in; but none of them seem better, or so well calculated as a common bed; upon which they may be laid, between the blankets in the day, where they will lie easy, and will be comfortably warm; and at night, in bed with the mother or nurse. It is not unusual to place a child in a basket before the fire in the day time; which is not a good practice, as the child is liable to be either starved or over-heated in this situation; whereas a bed affords a regularity of warmth and a just temperature that prove most genial and favourable at this time.

Cribs, and other contrivances for children to sleep in, in the night, seem by no means adapted to this climate, at *this early* age; and cannot, in cold weather or winter, be so comfortable and naturally and regularly warm as a common bed: they seem more calculated for the ease and convenience of the nurse, than the comfort and benefit of the child;

and very young children will seldom rest so easy and well in them as in bed with the nurse; as, at that helpless age, they will frequently make surprising efforts and attempts, when in bed with the nurse, to get near her; and are seldom so easy and contented as when they are so situated: a proof that warmth is agreeable to them; and, as it can be no other than an instinctive requisite, ought to be indulged.

The objections which have been made to a child's sleeping with the nurse, are; there may be danger of a nurse's overlaying the child. But of this there is little fear, if she has been accustomed to sleep with children; and is an accident that scarcely happens once in an age with those who have *not* been accustomed to it. Another objection is, that of learning the child a custom it may hereafter be difficult to break him of; but this seems founded more upon surmise than reality; as it may be generally effected, with a little pains taking, at a proper season.

Rest or quiet, seems the next essential requisite to *warmth;* indeed they are, as above observed, inseparably connected; for if a child is not kept still and quiet, he cannot be sufficiently and regularly warm. Children, at this age, show evident tokens and marks of dislike to extraordinary mu-

tion: they are fretful, and appear fearful and alarmed when they are thrown in the arms or hastily moved: from which, may it not be inferred, that they are not, even so early, entirely destitute of mental sensations? and that the mind is as susceptible of the impression of fear (in this instance) as the body is of pain? A child will, upon the lap, often very apparently discover an apprehension of falling by a sudden start, attended with a sinking; as is evidently perceived by the knee of the nurse; throwing out his arms at the same instant, as if to catch and save himself from falling; and which differs greatly from the starting or twitching occasioned by gripes, or any other similar cause, as it exactly resembles the sensation and effect a grown-up person has, who when, between sleeping and waking, he fancies himself falling from an eminence. This sense of fear in children is discovered, with exactly the same appearances, when they are quickly moved or tossed in the arms, awake. As a proof of the impropriety of much motion at this time, instances have occurred where death has been the consequence of hasty tossing in the arms, (without any other external injury) which would, we know, be healthful and grateful at a more advanced period.

It has been a doubt with philosophers, whether or not, children at this age have ideas or mental con-

ception; and they have been at a loss at what time, and by what token, the first dawning of the intellectual faculty is to be discovered: it is a point which perhaps may never be fully elucidated and determined, by *positive* proof; how far the above circumstance may be *one* means of leading to a discovery, time, and future observation, may determine: there can be little doubt, from it, that children at this period, have mental feelings or sensations, and that the fact itself will, conjunctively with other arguments, serve to point out to us the impropriety of much motion and exercise at this very early age.—Very great and sudden changes and transitions are never grateful to the human constitution (in a natural or healthy state) at any period: and when material changes are to be made, the more gradually they are introduced, the better; the necessity of which is in no one instance more striking and obvious, than in the case of infants, who would experience so great and sudden a change, from a state of continued warmth and quiet, to the opposite extremes, as would frequently prove fatal, if we did not do all in our power to prevent it.

It may seem proper in this place to determine and fix upon the time and manner in which these changes are to take place; and from what has already been observed, the following general rules may be adopted, as far as circumstances will admit.

In the *first week*, a child should not be carried out of the room, except into one immediately adjoining, and that, for necessary purposes, as dressing, &c. but be kept in bed, constantly, or as long as he is disposed to sleep or lie quiet, and never otherwise be disturbed, except to be fed, dressed, or cleaned.

During the *second week*, the same rules are to be observed, except that, towards the end of it, the child may be allowed to lie upon the nurse's knee, near the fire, and to be gently moved or dandled once or twice a day, for a little time. If about this time the child should, when undressed, seem gratified with having his limbs and body rubbed with the nurse's hand, it will be proper to do so; at first gently stretching his legs and arms, and gradually continuing to rub his body and limbs, which will be a grateful and salutary exercise.

During the *third week*, the time of the child's being up and out of bed may be lengthened; and he may be gently carried about the room, which will be a means of introducing him gradually to that strange, and, often, alarming sensation, viz. motion.

In the *fourth week*, the motion may be a little increased; but which it should not be to such a de-

gree as to shake or agitate the child much. If the weather be warm, he may, towards the latter end of the week, be taken into any part of the house which is not cold or damp; but if the season is cold it will be more adviseable to defer it a week or two longer. This seems too early, notwithstanding the season may be favourable, to venture out of doors into the open air. Care should be taken to prevent the child being in any place where wet linen are drying, which is extremely liable to give cold, and I have known more frequent obstruction and oppression of the breast and lungs with severe cough from this than other causes. It may also occasion griping. This becomes a necessary precaution, as servants are very liable to take children into such places, being unconscious of the dangerous consequences; and truly alarming I have often observed them to be.

Although all degrees of, what may, by some be termed *proper* exercise are omitted in the above rules; yet when it is considered, that the dressing, washing, shifting, and feeding, are all performed daily, and some of them repeatedly each day; they will be found to amount not only to sufficient exercise, but even fatigue, for the first or second week. No doubt particular circumstances and situations will very frequently make a deviation from the above general rules; in some cases, proper; in others, unavoidable; as the sea-

son of the year, the child's health, family situations and conveniences, &c. for which proper allowances must be made: yet these will seldom happen, to such a degree, as to prevent a compliance with them, in part.

It is of late become a practice with some to advise and direct the shaking and tossing of infants, and exposing them to the light and air of the room, repeatedly through the day; and that, on the day, or a day or two after they are born: also, carrying them out of the room, and into the open air, very soon afterwards. The motives for this practice are (most likely) founded upon the general opinion of air and exercise being conducive to health and strength: so they undoubtedly are; and are found to be highly expedient, as well, to preserve the human constitution in a state of health, as to restore it when impaired: yet as the best remedies are serviceable only as they are judiciously proportioned and administered; so, consistency, upon this occasion, should never be lost sight of. We find nature seeks for, and takes delight in, different *kinds* and *degrees* of exercise and air, suited to the different *periods* and *stages* of life: and although children, and the young of all animals, are at an early period disposed to be more active and playful than at a future and later; yet it must be considered that, desire, and even ability for motion, do not take place the moment of their birth (a few instances in the whole

animal creation excepted): but that they require an uninterrupted state of warmth and quiet, *for some time*, to *perfect* and *fit* them for motion and the *operation* and *effect* of the external air; which, when to excess, in severe seasons, proves very fatal to those that, even by nature, are the best provided against them.

It may perhaps be said, that exercise, begun so early, will forward a child, and be a means of bringing him sooner to the use of his limbs: yet if nature, as has been observed, has not then perfected and fitted these limbs for motion, we may do harm by forcing them beyond what they are capable of. It does not appear likely, that a child, who is even more than usually strong and healthy, will have its strength and future activity impaired, or the progress of it sensibly retarded, by a month's confinement at his birth: for, notwithstanding the indulgences we have been speaking of, it will be far from a state of total inaction, as the limbs and every part of the body will be considerably exercised by the washing, dressing, &c. which is daily and regularly practised; and which is as much, when properly performed, as can ever be immediately and essentially necessary for health, at this period.

It is remarked, that in Great Britain, a greater proportion of the children of the poor and indigent

die in their *early* infancy, than those of the more opulent; and which is accounted for from a want of warmth, which it is impossible they can have in the cold, uncomfortable, and, frequently, miserable habitations which fall to the lot of the poor and needy, in large towns especially; added to the great defect in the quantity and quality of their clothing: they seldom suffer for want of food, which they are commonly supplied with, very plentifully, by the mothers; as poor, laborious women often have a great quantity of suck. Admitting, however, that the number of deaths of the poor and rich are nearly equal at this period; as the most prevailing causes of death, in the month, may be said to be cold, and improper food (as will be immediately explained); it is obvious, that cold taken at or soon after the birth, must be the most general and prevailing cause of death with the poor of large towns; and that, consequently, it becomes a circumstance of very great importance to be duly attended to, by all ranks in every situation.

The children of the poor who survive the period of early infancy, generally appear more hardy and strong than those of the rich; as, those of the latter, although puny and weak at the birth, very often (especially when wet-nursed), by care and indulgences, survive this period; but, which very rarely is the case with those of the former, from perhaps, a want of these indulgences, will contribute

to health, at a later period; although it will, as it very commonly does, prove injurious and fatal, more early.

Finally—It is to be observed, that *cleanliness*, *ease* and *warmth*, are *essential requisites* for a new-born child, should never be lost sight of, and ought at all times to be diligently attended to.

FOOD.

It cannot be doubted that breast-milk is the most natural, as well as proper food for a child: but it happens, that some mothers are not disposed to suckle their own children; and that others are not capable of doing it for want of milk: and, in large towns, the difficulty that attends getting good wet nurses, and the danger attending bad ones, induce many to prefer bringing up a child with the spoon, which is commonly called *dry-nursing*, to the risque of getting a bad wet nurse. When a child is healthy and strong, this latter mode of dry-nursing, may be adopted with the most propriety, and a prospect of success; but when a child is sickly, weak, or cross-tempered, it will generally be found a perplexing, difficult piece of business.

A child does not require food very soon after his birth, nor is the mother capable of giving it imme-

diately: nature therefore has wisely ordered, that the infant's call, and the mother's ability to supply it, shall keep pace with each other. As a child, before birth, has received no nourishment by the mouth; so the mouth, stomach, and other organs of digestion, are not immediately in a proper state and situation to exercise their different offices. The bowels are lined with a mucous thick matter, of a black colour, called *meconium;* which is discharged in the course of the first or second day by stool; and until this is purged off, the child can receive little, or perhaps *no* nourishment from food of any kind; and which is better omitted. Therefore, in cases where a hired wet nurse is even provided and at hand, it will be better to avoid giving the breast for twenty-four or forty-eight hours after the birth, as it may do harm, and can do no good, before that time. It is, by some, thought necessary to give the child something to carry off this black matter; but which there is seldom or never any occasion to do, as the child generally has a stool or two the first or second day: and which if he should not, a little manna, a tea-spoonful or two of syrup of rhubarb, or a small tea-spoonful of castor oil, may be given to procure it; but the less such like things are used, the better; as they sometimes occasion troublesome gripings and loosenesses.

As it is commonly two, three, or even sometimes four days before the mother has milk for her child, it is usual to give him some kind of food during that

interval; but, from what has just now been observed, there can be little or no occasion for it: however, if it did no harm, there would be less occasion to forbid it; but which it certainly does, and that, oftener than is suspected. It is very common for children to be cross the few days before they get the breast, and which is mostly observed to be occasioned by griping; which griping is sure to happen, in a greater or less degree, very often considerably, if any kind of food, except breast-milk, has been given; and which is very easily and clearly accounted for (and will appear, by observation, to be so), when we consider the quality and composition of the food that is almost universally given;—namely,—*panada* or *pap;* which is composed of bread and water boiled and sweetened with brown sugar; to which is, sometimes, added a small quantity of milk: or, oatmeal and water, in the form of thin water gruel, with the same additions.

Although these have been intended for, and may seem to be, compositions that are palatable and light, and such as might be easy to the stomach at a more advanced age; yet, upon proper examination, they will not be found so well suited to a child, at this age, as might be wished, and as will appear by making a comparison between this kind of food and the mother's milk; which seems the likeliest method of placing the matter in a proper point of view. In doing this, it will be proper

to examine distinctly the parts which compose this food; the principal and most material of which, is

Bread; which, in whatever shape or form it is made or given, is a substance, we must acknowledge, a child's stomach is not naturally intended, disposed, or prepared to receive; therefore, no wonder, if it should frequently disagree; and which it may reasonably be supposed to do, from its weight, vegetable quality, or some particular antipathy, inaptitude, or dislike the stomach has to any thing solid; which last seems one very probable reason; as, when it happens to disagree, all kinds of bread are equally alike disagreeable, and that, commonly, even in the smallest quantity, and which I have frequently observed it to do with children, in other respects, remarkably strong and healthy, who could not bear the most trifling quantity of bread, of any sort, in their food without giving them apparent uneasiness. *Bread* may be known to disagree, when the food which contains it is rejected, or thrown up soon after it is taken, unaltered or unchanged in its appearance: or, by a looseness with much griping and green, sour stools; but it most commonly happens that the sickness, and the griping with looseness both occur together. The child upon this occasion is *sometimes* observed to have a very great dislike to the food when it is made thick with bread, and it is with difficulty he can be got to take it; but which he will take more readily, and with more pleasure, when it is made

thin. If the bread should contain alum, or have undergone any other adulteration, the bad effects of it will be increased. Water, that has had a piece of bread boiled in it, when mixed with milk, seems the least exceptionable manner of giving (if it can be called giving) bread.—No wonder bread should disagree now, when we find many grown persons with weak stomachs with whom it disagrees..

Oatmeal, in the form of water gruel, caudle, &c. is liable to the same objections with bread, as it produces much the same effects.

Sugar cannot be excepted to, exactly upon the same ground as bread; as, when it is mixed with the food, it dissolves,. and cannot therefore offend the stomach by its weight or substance; yet there is a very powerful objection to it, which is; that as sugar is disposed to turn sour upon the stronger stomach of a grown up person, it certainly, and without any doubt, will do it, in a much greater degree, with an infant; and will have a perpetual tendency to promote griping with, or without looseness; and, when such complaints do exist,, will add to them greatly.*

Sugar is almost universally put into the food of children; and the reasons given for it are; that it

*These objections do not apply to the best double-refined loaf sugar; which does not readily ferment, or turn sour in the stomach.

makes the food palatable, and which it is supposed, a child will not take, so well without it: and that, as it is rather loosening (when brown sugar is made use of), it will help to keep the body open. With respect to the former of these reasons, it may be observed; that if a child, from the beginning, is not accustomed to sugar, he will undoubtedly take his food just as well without it (a very few, if any exceptions to the contrary). But if he has been used to it for some time, there may be some difficulty in weaning him from it; yet that may generally be done by making a proper trial. As habits are not subdued without some difficulty at so early a period; we cannot be too guarded against such as may have an injurious tendency, even at this tender age. It is no recommendation to the use of sugar that it makes the food palatable, for as children are usually fed as long and as much at a time as they will take their food, they by that means overload their stomachs so much, that, by frequent repetition, the most fatal effects may ensue.——In answer to the latter argument in favour of sugar, it may also be observed; it very seldom happens that children have occasion for any thing opening, as they are at this age, if in health, naturally disposed to be open in their bodies; and when, at any time, they are otherwise, a little manna, castor oil, or magnesia, which may be given safely at any time, will be better for the purpose; as, any thing taken as a medicine constantly, loses, in a great measure, its effect; and, on that account, becomes of very

little use when most wanted. It may be said, the mother's milk is sweetish: it is so; and there could be no impropriety in imitating that saccharine or sugar-like flavour, provided the means used for that purpose were perfectly, or nearly, consistent and unexceptionable on other accounts. Although sugar imparts a sweetness to the food that gives it the flavour of the mother's milk; yet it adds, at the same time, other qualities which are foreign to it, and which make it an improper substitute. The natural sweetness of the breast-milk, and that which is produced by sugar, although much alike to the taste, may differ as much in quality as any other two sweet things: honey and sugar resemble each other a good deal in flavour, yet differ very materially in quality, and effect, when used as part of the diet or for other purposes: so may and does the natural sweetness of the breast-milk, and that produced by sugar, or any other sweet substitute that has yet been discovered.

The third and last article that composes this food, is WATER; which, when soft and pure, is not liable to any exception.* Milk, is seldom added the first two or three days; yet, in a small quantity, it would be an useful addition; although it will but very imperfectly counteract or lessen the injurious effects of the bread and sugar.

* The Delaware or Schuylkill water, when clear, is to be preferred to the water from the pumps in Philadelphia; as the latter is extremely impure.

Having descanted upon the qualities of the materials of which this food is composed; it may not be amiss further to explain how and in what manner it must constantly disagree, more or less, with an infant; in doing which, it will be necessary to consider; that the *digestion of the food in the stomach* is a process by nature established and supported, in the same regular, uniform manner, and with little variation, during life; and that to support this regularity, nature has provided for us, and directed us to the choice of, such kinds of food as are best suited to our support at the different periods of our life; from which if we sensibly deviate, the digestion will be interrupted, or go wrong, which must throw the stomach and bowels into disorder, and by which the whole body, if the change be considerable or continued, must suffer. There can be no doubt that the mother's milk is the only sustenance nature has designed for an infant at the time of his birth; that the stomach and digestive organs are accordingly particularly calculated and prepared to receive it; and that any other kind of food, which is foreign to, or differs very essentially or materially from it, must disagree more sensibly at this tender age, when the digestive organs are weak and imperfect, and, therefore, less able to overcome an error or irregularity from the diet, than at a future and more advanced period, when they have acquired a degree of strength.

The digestion of our food is always accompanied with, and (so far as has been discovered) depends chiefly upon a fermentation in the stomach; which goes on with great regularity in a state of health, unless interrupted or disturbed by something taken into the stomach which is foreign, unnatural, or unadapted to it; or which, by its quality, will check, retard, or vary the proper fermentation.

From what is here observed, it will be easy to conceive how well suited the *stomach* is, from its warmth, its natural juices, and the liquors regularly taken into it, to dispose the vegetable and animal food which we daily receive into it, and upon which we subsist, to ferment; and which happens very much in the same manner in, as out of, the body.

The human frame and constitution is so disposed by nature, as to require its support and nourishment from a combination of the efforts and effects of these two different fermenting substances (for stones, minerals, and every thing else in nature that is not capable of fermentation, will afford no nourishment to the body); and therefore the regularity of the digestion of the food, and the consequent health of the body, depend very much upon the quality and due assortment and mixture of these different substances or foods in the stomach; for if either the acid or pu-

* The doctrine of digestion depending solely upon fermentation is now obsolete. Solution has a greater agency in this process.

trid quality prevails too much, and for a continued length of time, the health will suffer by it; and in either case, the food cannot, for want of a proper and suitable ferment in the stomach, yield and give out its proper nourishment: hence the stomach and bowels are disordered for the present, and must lose their strength and powers in common with the other parts of the body; and, if the cause is continued, it will lay the foundation for many diseases. But when suitable proportions of animal and vegetable food are received into the stomach together, a proper fermentation ensues, by which the digestion goes on briskly, freely and without interruption; the food affords due nourishment, is grateful to the stomach and bowels, and does not disturb them or occasion any uneasiness in them (for it is necessary to a good digestion that it be quick and hasty; as whatever lays upon the stomach without digesting readily, does not digest perfectly, and always gives uneasiness): hence the propriety of, and the natural desire and inclination we have for, a mixture of animal and vegetable food constantly and regularly in our diet.

The injuries done to the human body by errors in the proportioning of animal and vegetable food, are as follows.

First, with respect to animal food, it is to be observed; that from nature's bountiful supply of vegetables and vegetable productions, in the form

of fruit, roots, bread, &c. wine, beer, and other fermented liquors, throughout the habitable world, injuries from excess of animal food rarely happen (especially to infants, in this part of the world): however, when from any accidental, occasional cause they do happen, a corruption and destruction of the body, from the effects of an excessive prevalence of the putrid fermentation, must, if the cause be continued, ensue; and which is the case in the sea-scurvy, when in long voyages, the seamen are deprived of, or restrained in, the use of vegetable diet: and if any of the human species were to be confined entirely to the use of animal food, of whatever kind, and water (pure water partakes of neither an animal nor vegetable quality, in the smallest degree), they would very soon die in the situation here described.

Secondly, with respect to vegetable food it is to be observed; that an excess of it will not upon all occasions be immediately fatal; yet it is, with all, in a natural and healthy state, inadequate to the purposes of good health. For it is well known, that the sourness that is produced in the stomach by a prevalence of the acid fermentation there (in consequence of the too free use of vegetables), is not only injurious (as acids in all forms are) to the growth and nutrition of the body, but that it is also the cause of indigestion, and severe and painful complaints in the stomach and bowels: for when a person, with a weak stomach especially, indulges frequently

and freely in greens, fruit, acids, and other vegetable productions, he will almost as certainly be troubled with a sourness rising from his stomach, the heart-burn, or an uneasiness and sense of a weight or load there; all, or each of which, are occasioned by an excessive prevalence of the acid fermentation in the stomach, which checks and restrains the digestion, by which the food lies as a load upon the stomach, accompanied with a painful sensation and oppression, and which is most commonly attended with costiveness with grown persons; but with children a sickness frequently, and generally a griping with looseness.

As the hand of *Providence* is admirably displayed through the whole creation, in connecting and adapting the several parts for the preservation of the whole; so particular care has been taken to adapt food to every animal suitable to its situation. As the human race are not in any parts of the known world so circumstanced as to be under a necessity of confining themselves constantly and entirely to the use of animal food, so their nature is not calculated to subsist upon it: but as there are frequent occasions in many parts of the world, where, if they could not subsist for long periods and seasons upon vegetables alone, they must perish, so nature has a provision made for such occasions; and this provision is; a power in the animal constitution to subdue, *in part*, an excess of the acid fermen-

tation and its effects, by a natural disposition in the animal to a putrid tendency, or putrefaction; and the greater the animal powers, that is, the stronger the constitution, the more this disposition prevails; from which, it becomes very considerable with the strong and healthy of grown persons; and of course but very slight and inconsiderable with infants.

Bread, and sugar, together or separately, when mixed with *water*, in the form of *panada*, or *pap*, are, in common with other *vegetables*, readily disposed to turn sour in a certain state of warmth, and with a slight degree of fermentation (as will convincingly appear by making the experiment): such a mixture, therefore, taken into the stomach of an infant, where it will meet with nothing that will, in any considerable degree, counteract this acid tendency, must inevitably produce an acidity or sourness, in a degree proportioned to the quantity taken, and the length of time it is continued. It is from this cause the sour smell and green colour of childrens' stools proceed; which are always attended with griping and looseness; sometimes with convulsions; and which frequently prove fatal at this early period. When this food has been given to children, I have constantly observed them to have either a sickness, or sour, green stools with more or less of griping, or both, which have generally increased while the food was continued, and which

were mostly troublesome, often alarming: and, on the contrary, when I have been able to prevail with a nurse to avoid giving any thing until the mother's milk was ready, such like appearances and symptoms have rarely occurred, and when they did, it has been in so slight and moderate a degree as not to disturb the child, or be worth notice.

It will, no doubt, now and then happen, that children, from causes which we are strangers to, will have complaints in the stomach and bowels that are alarming and dangerous; yet, if nothing in its nature sour, or disposed to turn sour, be taken in at the mouth, the sour smell and green colour of the stools will not happen, except perhaps, in the slightest degree. Cold is a very common cause of griping with looseness; but, in that case, the stools will be nearly of the natural colour, and free from sourness, if nothing in the food conspires to make them otherwise.

The sour smell, green colour, and the watery and often frothy appearance of the stools, are unerring signs, and the regular consequences of the acid fermentation from improper food.

The mother's milk partakes of both the animal and vegetable quality, and therefore is, as nature designs it, perfectly suited to the purposes of digestion and nourishment for children.

Cows' milk also partakes of both the animal and vegetable quality: and although it differs somewhat from breast-milk, may yet be substituted for the latter, and to advantage when properly directed and managed; as will be presently explained; but it has not sufficient powers and qualities effectually to correct the injurious effects of bread and sugar, when mixed with them, although it will do it in part.

From this short and familiar account of the *digestion* of the food, the propriety of attending to the quality of it, with children, is strikingly obvious; as they are ill qualified, from their natural weakness and delicacy, to combat the effects of a material irregularity in it.

Sir John Pringle, a physician of eminence, has been at great pains in investigating and ascertaining the nature of the digestion of our food; and most of the arguments here offered are consonant with his reasoning and experiments upon the subject. With respect to vegetables, he in general observes; that when they are taken alone, or even in over proportions, into the stomach, by the acid fermentation which they must necessarily undergo, the digestion is interrupted, and many complaints of the stomach and bowels produced; all of which are observed to happen the most remarkably with those of weak stomachs and bowels, even of grown per-

sons. What effect, therefore, may a diet altogether vegetable, and which differs so much from breast-milk, be expected to have upon the uncommonly weak and delicate stomachs and bowels of infants? certainly a very bad one. *Bread* must disagree, on two accounts; as being a vegetable; and from its substance, which (as already observed) the stomach of an infant is not by nature intended, and, of course, prepared to receive.—*Sugar* will disagree from its disposition, as a vegetable, to turn sour, as well as from its other unfavourable qualities. They who are unacquainted with the properties of sugar, cannot always be readily brought to conceive that one of the sweetest things in nature will so readily and easily be converted into the directly opposite quality, to the taste of sour; but which they will assent to, and be convinced of, when they reflect that it happens in the preparation of all sorts of vinegar in which sugar is an ingredient; and that vinegar, for some uses, is made of sugar and water only, by means of fermentation.

From what has been observed, there will not be much difficulty in accounting for the prevalence of griping with looseness, &c. with infants at this period; especially when it is farther considered how few children escape having food of the quality above described forced into them in great quantities with little intermission, frequently from the moment of their birth. It is a very common practice with nurs-

es to feed children, at this time, when they are cross, supposing they are hungry and want food; not knowing that they are, by such means, adding fuel to the fire, and promoting the cause, which is no other than griping from the same sort of food which they have before given. For although fretfulness and crying may be signs of hunger, yet they are not always so, as, an uneasy or painful sensation, from griping occasioned by cold, improper food, or any other cause, must equally occasion them: and when a child has had as much food as is necessary, how great the absurdity, how great the hardship upon him to be stuffed and gorged night and day with immoderate quantities of what, for the most part is the chief or only occasion of his uneasiness! If children are not fed at all, are kept warm and dry, still and quiet, and are never taken out of bed except to be dressed and cleaned, they will very rarely be cross the first, second, or third day; and, if they are, it may as reasonably be supposed to proceed from any other cause as hunger. Warmth, and rest answer every intention of nourishment until nature requires the use of food, and prepares the stomach and other organs and instruments of digestion to receive it, for that purpose.

There is yet one other argument remaining in support of the impropriety of this food at this period, which is; that a child shall have, while he takes this food, for the first two, three, or four days before he gets the breast, a sickness with or without throwing

up, or a griping with looseness, &c. which will disappear totally, or in a great measure, by quitting this food and being fed entirely from the breast; and this is what happens very often, and in a very sensible manner, as may be observed by those who will notice it. To what causes are these sudden and material changes and appearances to be attributed, independent of the impropriety of the former food, and the salubrity and propriety of the latter? Is not this as convincing an argument as can be given, and would there need any other?

It is of the utmost importance to have this subject properly understood and attended to, as the number of children who suffer in their health and lose their lives by the gripes with looseness, at this critical juncture, is very considerable; and as there is no complaint which, at this tender age, they suffer so frequently and so much from, and which is to be more dreaded, especially with those who are dry-nursed, and are of course confined to it for a longer time: for although a child who is intended to be wet-nursed may suffer a good deal by improper food, yet it is but for a short time, and as he gets the breast in two or three days, the cause is removed, and he generally, sooner or later, overcomes the effect of a short irregularity: yet puny, weak children may, and often do, lose their lives from it, even in that short space of time. But when children are dry-nursed, and confined to such food,

no wonder so few should thrive and do well: those, who live, are most commonly teazed with a frequent griping and looseness, which keeps them always weak, puny, and spiritless, and gives them a pallid sickly look; and daily experience but too fully convinces us that numbers are carried off by it.

From what has been observed, it will appear; that children very seldom can have a *real* occasion for food, of any kind, before the mother is capable of supplying it; and that, food (especially such as is commonly given upon this occasion) is more likely to do harm than good: therefore, it will be better, in general, to avoid giving any thing as food, till the mother's or another breast be ready. This practice, considered as an innovation in the established custom or rule of nursing, will, no doubt, meet with opposition from some, merely on that account; it can be founded upon no other pretext, as reason and experience unitedly conspire to confirm the propriety of this practice, and to place it in the most clear and convincing light; and which must have its proper weight and influence with those who prefer the conviction of their own senses to vulgar prejudice: yet if any doubts or objections arise, they will be solved in the best and most satisfactory manner by making the experiment, which, upon most occasions, may be done with the utmost safety.

It sometimes happens when a mother intends to nurse her child herself, that it is some time before she can be satisfied whether she will be able to do it or not (especially of the first child), from the state of her breasts, the quantity of her milk, or other causes. It also may happen, that when a wet nurse is intended, she may not be ready or at hand for a like time. In either of these cases it will be necessary to give the child some food, and to continue it until the breast be ready: for which purpose, it will be advisable and proper to make choice of such food as appears to resemble and approach the nearest in quality to the mother's milk. *Asses' milk* comes nearest to the human of any we are acquainted with in use; and therefore, when it can be had, is very desirable and proper: it should be given, alone, without bread, sugar, or any thing else, and always as warm and fresh milked as possible; and the child may be constantly fed with it, nor will any other kind of food be necessary: but, as from the expence which attends it, and the consequent difficulty of getting it, the more opulent only can be indulged with it, it will be necessary to substitute something else that can be more universally obtained. *Cows' milk*, as being the only milk in general use, must be had recourse to, and will answer the purpose very well; but as it is a good deal thicker than breast-milk, it will be proper to reduce it to the same consistence; and which may be done very well, and with propriety, by di-

luting or mixing it with water. As milk is frequently mixed with water by those who sell it, it cannot be said, with any degree of exactness, what proportion of water must be added to the milk to reduce it to a suitable consistence: but, if the milk be good, about one part milk, and two parts water, will do very well, to give at the first. In mixing the milk and the water, the following directions ought to be attended to. The water that is to be put into the milk must be the softest (if pure) that can be had, must have boiled, and be of such a heat when put into the milk, as, when thus mixed together, they may be as nearly of a proper warmth for the child to take as may be (viz. about the warmth of milk when it comes from the cow). It will be advisable to mix no greater quantity at one time than it may be supposed the child will take at once. The milk ought to be as fresh milked as possible, and, if warm from the cow, the better: but as it can seldom be had warm from the cow oftener than twice a day, it may at other times be prepared from cold milk. It ought not, at any time, to be put upon the fire to warm or boil.

It may be better if the milk is obtained from one cow only, and not a number, as is often the case. It is observed that the suck of two different nurses sometimes disagree with children; so, to avoid that

risque on this occasion, the precaution may be adopted.

The advantages which attend this mode of mixing the milk and water, are; that the milk, by this means, suffers little or no change or alteration, except being thinned, and is received by the child in a state which must be best suited and most agreeable to his stomach: whereas, on the contrary, when milk is boiled, it suffers a change which makes it harder of digestion, to an infant, and also binding: warming it upon the fire, without boiling, gives it these qualities in a slighter degree: if milk is suffered to stand until it be so cold that the cream separates, its quality is altered: if milk and water, when mixed is suffered to go cold, and is warmed again once or twice, especially in warm weather, it is very apt to turn sour. From which considerations, it appears how necessary it is to conform, as near as may be, to the rules above-named; all which may readily be complied with, in part, very easily, upon most occasions. There will seldom or never be occasion to put *sugar* into this food to induce children to take it, which they will do equally as well without, if, as has been before observed, they have not been accustomed to it: and if a child is to begin with this food who has been used to sugar, and refuses to take it without, a little may be put in, which may be diminished in so gradual a manner, that, in a little time, he may, perhaps, come

to take it without any at all. *Sugar* is somewhat less injurious than *bread;* therefore it is the lesser of the two evils. Loaf sugar will always be preferable to brown.

This liquor or food, thus prepared, a child may be fed with as often as feeding is necessary, nor will any other kind of food (if this agrees) be needful; and, from what has been observed, the oftener it is fresh made, the better, and which is much preferable to what is warmed over again.

Care should be taken that the milk is not adulterated with any thing that may be hurtful: chalk is said to be put into the milk in London, which must make it very improper food for children, as chalk is powerfully binding. In this town I believe nothing but water is put into the milk, which can do it no other injury than making it poorer and thinner.

This is a food which can be easily procured by all ranks of people, and is prepared much more readily and with less trouble than that made in the usual manner: is palatable and agreeable to children, as they take it readily, and frequently with avidity and seeming pleasure: and what recommends it still more powerfully, is, its approaching near the quality and consistence of, that natural food, the mother's milk; of which although it should not be supposed to be an exact imitation, yet it appears to be

nearer than any thing else we are acquainted with that can be generally and easily obtained. It is very nourishing, and agreeable to the stomach and bowels, as appears by its seldom producing, or being accompanied with, any of the disagreeable symptoms of griping, &c. &c. which the food, prepared with *bread* and *sugar* (as has been observed) so very commonly does.

When a child is very small or weak at the birth, from any cause, there does not appear to be any necessity for giving food much sooner than if he is lusty and strong; as, if what is given should happen to disagree, by bringing on a looseness, or otherwise, the food may, in his weak state, do much more harm to him, on that account, than it would to a stronger child; and in such a case, it will be more advisable to wait till the breast be ready, and the child able to take it : but if a child is so very weak, that there appears but little prospect of his being able to take the breast, in a reasonable time, it will be proper to give him something; and, upon such an occasion, nothing perhaps is so proper as broth, which must be thin and weak: chicken broth, or chicken tea as it is called, is very well adapted to the purpose. But, *veal* tea properly prepared, will be preferable to that of chicken or any thing else. If any other kind of food may be thought necessary, *asses' milk*, or the *milk and water*, may be given at intervals; perhaps it may be

full as well to give the broth and milk and water alternately and by turns. Asses' milk seems admirably calculated to this occasion.—The following case, which fell under my observation, will explain the situation we are treating of.

Miss M——, at her birth, was remarkably small, and very weakly, although at her full time: it was intended she should be nursed by her mother: the common food of *panada*, or *pap*, with sugar, and without milk, was, as usual, given the first day. On the second day, she had a sickness, which brought up part of what she took, attended with a looseness and griping: a little milk was now added to the food; the complaints continued, and on the third day the looseness was increased, with more griping, and watry, sour stools of a greenish colour. The child was now so weak as not to be able to take the breast, which was ready for her, and there seemed to be no probability of her living two or three hours; she was accordingly given up by the nurse and attendants. Seeing the child in this situation, about to expire, I desired a little broth might be given; a little *veal* broth was very soon procured, and a few tea-spoonsful was, with some difficulty, got down, which staid upon the stomach: in a short time a little more of the broth was given, which went down rather better than the first, and also staid with her. The child, from this time, began apparently to revive, and to show signs of returning

strength: the broth, only, was continued all that day, and the next her complaints were much abated, and she was able to suck a woman who had given suck for some time and was purposely provided, thinking her breasts would, for that reason, be easier to draw than the mother's: the child recovered, was afterwards healthy, and throve well.

If the child, in the case before us, had not been fed at all with the *panada*, she would not, most likely, have ailed any thing, nor wanted food: for if she was able to survive, the three days, with such complaints, how much better might not she be supposed to have been without them, as the food which she took cannot be supposed to have afforded her any nourishment? There is little doubt, from the circumstances of this case, but that the *panada* was the occasion of the sickness, griping, &c. and that the child must have died, as great numbers do *in exactly the same situation*, but for that accidental trifle, the broth.

Few periods of infancy are more embarrassing than the short one we have been attending to of a new-born child before the mother's breast is ready for him. The child's cries, the mother's distress in hearing them, and the nurse's solicitude to still them, frequently form a scene somewhat distressing. The common cause of the child's fretfulness so commonly attributed to hunger, is not, cannot, from what has been observed, be the

general cause. There can be no doubt but that the uneasy sensations a child must experience from a sudden change of situation, exposure to the air, the dress with which he is necessarily encumbered, and the free manner in which he is handled, and the cold which he gets so as to occasion griping and uneasiness in the bowels, are sufficient causes of uneasiness, independent of the two general and premature use of food, and which might very generally be avoided by averting and preventing as much as is in our power, these disposing causes, and which consists in affording ease, warmth and quiet, and avoiding food, especially such as is improper.

Although I have, at some length, been endeavouring to point out the most suitable food, and the manner of administering it from the child's birth till the mother's breast is ready for him, if such food should really at any time be wanted; yet in many cases I am, as already observed, convinced it will be inadequate to the purpose. There remains however a method which will be more certainly successful; which is, that whenever food may be necessary at this period, it ought to be supplied from a breast. It can rarely happen but that this may be obtained, either in town or country, from some relative, friend or other healthy woman, who will spare a sufficient supply of suck 'till the mother's be ready; as the sex, of all ranks, feel much for each other in this situation. It is needless to urge

the certainty and propriety of this measure, and the effectual relief which it will afford; and still less to point out the necessity of it, when all other kinds of food may have particularly disagreed.

Before closing this subject, I must repeat; that from the foregoing arguments, confirmed by constant experience, I can confidently assert, that in all cases, a child should not receive food of any kind, not even from a breast, earlier than twenty-four hours after his birth; and that, in a general way, thirty-six or forty-eight hours will still be preferable.

OF THE FOOD IN DRY-NURSING.

When a child is intended to be dry-nursed, the the *milk and water*, prepared as directed (page 45) may be begun with and given, towards the end of the second day, and continued; and if the child thrives well, it will be advisable to confine him to it entirely, without giving any other food, except veal tea occasionally, as hereafter advised, for the first, second, or third month, or until his stomach will bear to take it with bread in it: when that will happen, can only be known by making the experiment; as some will bear it much sooner than others. There can however be no occasion, if the child does well, to make trial of the bread for the first or second month; and when, at the end of the second

month, if a little bread is put in, and agrees, without producing any of the disagreeable, untoward symptoms of sickness, griping, &c. before enumerated, it may be continued, and increased in proportion as it seems to agree. Care is necessary in the choice of the bread: it should by all means be free from alum (which is sometimes put into the flour to make it white), which, from its strong astringent or binding quality, will be highly injurious: it should not be too fine, nor too coarse (although the former extreme is less to be avoided); the first, may make it binding; the latter, too loosening. The bread should be made with yeast, without butter, or any kind of seeds, and very light; so that, when mixed in the food, it may be as smooth and free from lumps as possible; which will induce most children to take it better, and it will be more likely to sit easy upon the stomach. Hard biscuits, commonly called *crackers*, are sometimes given; but they are heavy, owing to their being made without yeast, and not fermented. Every sort of bread made with leaven is very improper for children at any age, as it is difficult of digestion, and is much disposed to turn sour upon the stomach.—When bread, of any kind, is put into the food, it ought to be boiled sufficiently in water first, and the milk put to it afterwards without being boiled. When all sorts of bread have disagreed with the child, I have sometimes found that a piece of upper crust, boiled whole in water, and the wa-

ter poured off clear and mixed with the milk, would agree very well. By this method much of the nutritive part of the bread is obtained, and is given to the child in such a manner as must be most acceptable and best suited to his stomach and digestion.—Sugar will always, and at every age, be better omitted; as the bad effects of it will, during the state of childhood, still take place: and although its use may not always be attended with the sensible bad effects of looseness with sour green stools, &c. yet it may affect the digestion, and cause an acidity or sourness, in such a degree, without looseness, as to injure the stomach and bowels, and prevent the food from affording the nourishment it otherwise would give. It vitiates the taste; and those children who are accustomed to it in their food, will seldom be brought to take any thing, willingly, that is not sweet; which makes them nice and particular in the choice of their food.—It palls the appetite so much, that a great many children who are liberally supplied with it, have weak, bad appetites; which last, united with the other bad effects produced by it, must make them puny, and prevent their growth and thriving.——It may be said that many children do well with sugar in their food, and suffer no sensible inconvenience from it: so it may happen: but as it so very frequently happens otherwise, and may do some harm, although not always in the most sensible and perceptible degree, is it not better, and more eligible, to avoid the risque of any, the least bad consequence from it,

by entirely omitting it; as no good or advantage can attend its use; and the most that can be said in its favour, is, that it is an indulgence, and that, a needless one.

There is a machine made of horn, or tin, in use with many for feeding children: it is so contrived that the child sucks his food from it as from a breast. Some children will not, without difficulty, take their food with a spoon or boat, who will take it more readily with this machine; upon which occasions it becomes very useful; otherwise it has no advantage over the spoon. I have known some children who took their food very unwillingly, and were much troubled with the gripes and a looseness, when fed with a spoon, who took it more readily with this machine, and were more free from this complaint; but which I discovered to be owing to their dislike and the disagreement of bread; as those children took it greedily with a spoon, and were well with it when the bread was omitted or lessened. As a child gets his food from this machine by sucking, he has it thinner than when fed, with the food as it is commonly prepared, with a spoon.

If the food and manner of preparing it should in every form disagree with the stomach and bowels, recourse may be had to Naples biscuit; which may be softened down with a little boiled soft water and given with a tea-spoon. The biscuits may be made

of the shape of a finger, in which form a child will suck and dissolve them in the mouth, occasionally, without being softened with water.—This is a composition that is found well adapted to a child's stomach and digestion: the proportions of flour, egg and sugar, of which it is composed, are well adapted to form, without the aid of any fermenting leaven, a light substance, which like breast-milk, being composed of a mixture of animal and vegetable matter (*as explained in the account of the digestion of the food*), becomes well suited at this time. Here the acid effects of the sugar are counteracted by the egg. How far yeast might be substituted altogether or in part for sugar, to make the composition light, I am not yet informed.—As this food is sweet, a child may be induced to take too much of it at a time if some caution is not observed.—One objection to its use, is the expence: however, there will seldom be occasion for its use for any great length of time, as trials of the other food may any time be made, and repeated or continued as they appear to agree.

A child, whatever he is fed with, should never have more food forced upon him at a time than he is disposed to take readily: for if he should happen to overload his stomach, and not bring it up again in a curdled state, it will disorder him, and he may suffer much from it. This stuffing, gorging and overloading of children with food, is an error

as great and prevalent as any in nursing. It is done with the laudable intention of promoting their hasty growth and thriving, and also to make them rest better. These are however mistaken designs, as the contrary purposes are produced by them. If a child overloads his stomach at the breast with milk, (as often happens) he is relieved by throwing it up in a curdled state; but this seldom happens with a child who is dry-nursed, especially when he gets bread; therefore, when his stomach is overloaded, he will suffer as much as a grown person in a like situation; and frequent repetitions of the practice will have the worst, and sometimes fatal consequences.

Nothing is more common than to give and even force food into a child when he is cross, notwithstanding he has been plentifully fed but a short time, perhaps a few minutes before, and when his fretfulness is owing to the improper quality or undue quantity, or both, of the food already given. As the taking of food is the most necessary and powerfully instinctive act of an infant, he, when in pain from any cause, seems soothed and lulled while employing it: hence while the spoon is in his mouth, he appears appeased, although his stomach is overloaded with food. When a child, who sucks, is in pain from any cause, he will, if permitted, lay at the breast continually, and is never quiet but when so amused.

It is necessary therefore to be very cautious, soon after a child has had a reasonable quantity of food, in giving him more, if cross, although he should appear to receive it greedily; as such fretfulness may most likely be altogether occasioned by uneasiness or pain from what he had before taken: and it will be better always to give a child rather too little at a time than too much, by giving a little and often. There is nothing that relates to the management of a dry-nursed child that requires so careful an inspection, and so nice and judicious a regulation, as the quantity and quality of the food, and nothing that is so generally misconceived and ill-managed; no wonder therefore the consequence are so often unfavourable!

Many persons have a habit, in feeding a child, of putting the food first into their own mouths, with a design to bring it to a proper warmth. Independent of indelicacy, it is improper, as the saliva of the person's mouth will be hurtful to the digestion of the food in the child's stomach; the saliva, being a necessary aid in digestion, and can only be properly furnished by the mouth of the person who is to have the food.

I have known many instances of children who have been dry-nursed, whose food was prepared in the usual way, of milk, bread, and sugar, with, and without a proportion of water in it; who, notwithstanding repeated medical assistance, have been

brought to death's door by perpetual gripings with looseness and sour, green stools, and who have been restored by confining them entirely to the simple food above mentioned, with which, alone, they have been supported for some months, and have grown remarkably strong and healthy; and when at any time, during that period, a little bread was, by accident, or otherwise, put in the food, the disagreeable symptoms as certainly recurred, and continued till the bread was again left out. When bread disagrees with children, I frequently observe them to have a dislike to the food that contains it, which they take very unwillingly, although it be made quite smooth; and bread of every sort, is equally disagreeable: however, although this is commonly the case, yet it may, and does sometimes happen, that a child who has been accustomed to have bread in his food, will not willingly take it without something in it which will thicken it, when it so happens, a little flour may be boiled in water, and the milk added to it after it is boiled; and as flour is rather binding, it will be an useful addition for the present; and if, hereafter, it should be proper to drop it, it may, most likely, be done by putting in a little less each time the food is made, till, at last, it be entirely left out. Children's food is prepared in this manner chiefly, with flour instead of bread, in Paris; and that, very likely, from being found to agree so much better, which in general it certainly does, while they are very young.

From finding, in so many cases, that the milk and water prepared in this manner, had so much the advantage of the food made in the usual way, I have been induced to prefer and advise it upon all occasions, when a breast is wanting; and have repeatedly found it to answer most desirably. However, I am but too sensible it is imperfect and falls short of an exact imitation of breast-milk, and therefore of course may be expected, and will be found, sometimes, inadequate to the purpose; yet, until something else is discovered that promises, and is found by experience, to be better suited to the purpose, and that can be easily and universally obtained (for whatever is rare, or difficult to prepare or come at, will be far from answering a desirable and general intention) it is justly entitled to an attention and preference.

I have observed that some children, who take this food, are sometimes costive; and which is the only unfavourable effect I have observed it to produce: but as the effects of costiveness are much less to be feared than those from looseness, and as costiveness is always easily, readily and safely removed and prevented, it becomes an object of trifling importance; and if a child, who takes this food, should at any time be inclined to be costive, a little manna, castor oil, magnesia, &c. will always relieve it. A little chicken or veal tea will be proper for a child who is dry-nursed and takes this food, and

may be given now and then, occasionally and particularly when the food seems to disagree, either by causing a sickness with or without throwing up; or costiveness; both which the broth or tea is, in a particular manner, calculated to relieve; and a little of this tea added to the milk and water approaches as near to, and produces as close an imitation of, the quality of breast-milk (the sweetness excepted) as perhaps is to be obtained by a familiar artificial composition: but as preparing the tea and mixing it with the milk and water constantly, would, in many situations, be attended with trouble and difficulty, and as it is not always needful to be done constantly, a very good purpose will be answered by giving the tea now and then, when convenient, alone and by itself, at intervals with milk and water; observing, to be more exact and careful in giving it at those times the child happens to be costive, has a looseness (as is equally proper in both) or sickness, or is any way disordered in his stomach or bowels.

As the good or bad success of every experiment or trial that is made must, upon all occasions, depend very much upon the manner in which it is conducted; so, in feeding a child with the milk and water, if due care is not observed in the preparation and manner of mixing and giving it, it may disagree, and become as improper as any other kind of food. The proportions of the milk and water above named

are, one part milk, and two parts water: for if one part milk, tolerably good, and two parts water, are mixed together, they become of nearly the consistence, and look like, breast-milk (and if properly sweetened could scarcely be distinguished from it by the taste): so that these proportions must, without doubt, be the most suitable, and are the most likely to agree with a child at this time.

As the quality of milk varies much, it being sometimes to be had very good, and at other times but very poor and thin, the proportioning of it with the water must, in some measure, be left to the discretion of the person who does it. There is a rule, however, in doing it, that ought invariably to be observed; which is; to be careful to make it thin enough, and not exceed the proper proportion of milk, especially at the beginning and in the first month; for if too much milk is put in, it will make the food heavy of digestion, which will clog and cloy the stomach, and may be attended with indigestion, costiveness, with pasty stools; or a griping, with frequent stools, small in quantity, and frequently curdled and resembling curds and whey; or a sickness and oppression at the stomach, with, or without throwing up, but most commonly without. Therefore without an exact observance of the rules and precautions, in mixing and giving the milk and water, as here and above described, the proposed benefit and advantage from it must not be expected, and

cannot be obtained: for, as above observed, it is not the doing a thing, but the manner of doing it, that must ensure success. This caution, in proportioning the milk and water, ought to be strictly observed, remembering, that it is much safer to be under, rather than exceed the proper quantity of the milk; for as nurses, or those who feed children, are liable to err in putting in too much milk, by way of making the food, what they suppose *good enough;* it will happen, that to avoid the risque of *starving* them, they may literally, and as it is proverbially expressed, *kill them with kindness.* For instance; if a child is fed with milk as it comes from the cow, or with a third part water in it, or perhaps even one half part water, it will very likely disagree, as will appear by some of the unfavourable symptoms, just mentioned, coming on; and, if constantly continued, may cause the child's death; and from which nothing can rescue him but such an uncommonly strong constitution as falls to the lot of a very few: whereas by reducing it properly with water to such a consistence as may adapt it to the tone, strength, and powers of the stomach, and such as it is by nature prepared and disposed to receive, it may be expected, and will be found to agree with the major part of those children to whom it is given.

A state of childhood, and a sick bed, are the only situations in life that are denied the refusal of

disagreeable and improper things, notwithstanding they may be called *good things*. The sick man has little better chance of avoiding taking what he dislikes, and is injurious to him than the infant; for, although the latter can make very little opposition, and is compelled to swallow every thing at the pleasure of his nurse, while his mouth can be forced open; the sick man is in a situation very little better, as he is as certainly teazed into a compliance with the requests of his friends, by repeated petitions and entreaties. By *good things*, in the diet, is commonly understood, what are the most scarce, costly, rich, and strong, of their kind: and many would suppose themselves negligent in their duty if they did not get all the *good things*, that their address or pockets could procure for their children or sick friends.

I cannot help repeatedly deploring that, upon this, as on other similar occasions, the baneful influence of prejudice and custom is so difficult to overcome, however apparently advantageous the change may be in the result. This difficulty is chiefly supported and increased by nurses, who, it is well known, are not "over fond" of being put out of their way, and who seldom, willingly, submit to be directed, in occasions even of urgent necessity, if they suppose it is in a department which falls under their own immediate direction. It appears to be this jealousy of their supposed rights and privi-

leges that makes them so tenacious of them, and so zealous in preserving them from infringement: or, it may arise from a mistaken and false conception they form of their own merits in their profession; in thinking that to have occasion to receive advice from another, will betray a want of knowledge in themselves. Medical men are seldom allowed, or as seldom care to interfere in this, or such other like trivial matters as they have been thought (although they are really of the utmost consequence); being deterred from, or despairing of success in, the attempt: or, finding, perhaps, acquiescence and compliance to be more political than an opinion urged: but, as such a deportment becomes a chain thrown across the road to improvement, attempts ought to be made to remove it; and which might be done compatible with their own *real* dignity; which could not fail in the end of being acceptable to the public; and which would be more laudable and candid than suffering an interested servility or *false* dignity to preponderate against the calls of duty to their friends in particular, and the benefit of the community in general.

There will seldom be any occasion to vary or alter the proportion of the milk and water, if it agrees with a child, the first month. In the second month however, if a child thrives, and is lusty and strong, the water may be decreased, from two parts, to one half, or nearly so; which will make the food half

milk and half water: it will be advisable, at all times, to be careful not to put in too much milk, which may make it heavy of digestion, and may, as has been already observed (page 62), clog and cloy the stomach, which will be attended with disagreeable consequences; whereas a trifling error in the over proportion of water, can do no harm, and which makes it the safer side to incline to.

As it seldom happens that a child is so regular in his body when dry-nursed, as when he gets the breast; it will be needful to attend to that circumstance: if he be *costive*, half a tea-spoonful, or more of *manna* may be given, dissolved in a little warm water, or in the food; and repeated as often as there is occasion. As manna is one of the gentlest purgatives we are acquainted with, and pleasant to the taste, it becomes very proper and well suited to this occasion: however, if there ever should be any difficulty in getting a child to take it, a tea-spoonful of castor oil; three or four grains of magnesia; or a little senna stewed with a few prunes, will, any of them, answer the purpose very well, and be very suitable; although the effect of them will not always, perhaps, be so permanent and lasting as that from the manna. *Rhubarb*, is not so proper upon this occasion: for although it may answer a present purpose, by giving a stool or two; yet it leaves the body costive and bound afterwards. It is very common to give it upon this occasion; but, for the

reason here assigned, it is not a fit or desirable medicine.

When a child is too loose in his body, it will be advisable to check the looseness: the means to be taken for that purpose are fully explained hereafter. A child can never be said to have a looseness, or such a one as need be stopped, or even checked, while his stools continue of a proper consistence and are not inclined to be thin and watery; as children, who have good appetites, and plenty of such kind of food as agrees with them, will commonly have three, four or more stools in the course of twenty-four hours, when in the most perfect health.

By a proper attention to the food, &c. children who are dry-nursed will generally do very well: cases will, however, notwithstanding every precaution, now and then happen, where they will not thrive so well, or at all, without a breast: but that is never to be discovered until a trial of food has been made; and there seldom or never can be any impropriety or harm in making the experiment. The length of time proper for a trial of food to be made can no way be precisely ascertained or limited in this place, but must depend entirely upon the circumstances of the child's health and strength. When a child is, at his birth, weak, or sickly from any cause, such as, being born before he is at the full

time; from being weak and puny when born, although at the full time; or, from a disease which he may happen to labour under, as a looseness, &c. three or four days or a week may be as long as it will be prudent or advisable to make the trial, if it appears not to agree. But when a child is, at his birth, healthy, and has strength, the trial of food may continue a week, or a fortnight, or even three weeks: a longer delay, in either of these cases, may, if the food does not agree, so far reduce the child as to risque his life; and may also prevent his taking to the breast afterward. If the food agrees the first, second, third and fourth weeks, it may be reasonably expected to do so ever afterward.

Before I entirely quit this subject of diet, it may not be amiss to remark, that should it be said, many children do well with dry-nursing upon the usual food, and therefore there is no occasion to alter it: I do not hesitate in acknowledging, that such instances are to be met with; yet cannot allow them to be common, or frequent; on the contrary, they are, by daily experience, proved to be very rare. I have no doubt, in declaring, as I do it from experience, that food, prepared in the manner here recommended, has greatly the advantage of that made in the usual way; and that many children will do very well, in dry-nursing, with this, who will not do at all with the other; as many, whose lives have been in imminent danger from its effects, have been

restored by this, with little, and often no other kind of assistance. Those who, from prejudice, or any other cause may still be inclined to favour the usual mode, may, when that appears not to answer their wishes, be induced to vary it, by adopting and making trial of this: it has some qualities which will always encourage and promote its use; which are, that it is simple, and easily tried; it cannot possibly be attended with the least bad consequence; and, it may be safely declined at any time if it should not answer.

There is oftentimes a good deal of difficulty in getting children to take the breast, and which may happen from different causes; the most common seems to be, bad nipples; which, from their smallness, or unfavourable shape, a child cannot easily take hold of: in which case they must be well and frequently drawn by an older child, or the mouth of a grown person; or by a glass: but the mouth of an older child particularly, does it most effectually, and is to be preferred. Sometimes the breasts are so swelled and distended as to bury the nipples; and if the nipples are even easy to take hold of, yet the breasts, in that situation, are oftentimes hard and difficult to draw: upon this occasion the breasts must be repeatedly drawn until they be softened. The breasts of some are much easier to draw than those of others; and it is very usual for one breast

to be easier to draw than the other, of the same person.

The liking that children sometimes take to one breast more than the other, is not easily accounted for; as, it often happens, that they repeatedly refuse one, and cannot be even brought to take hold of the nipple by any means or pains that can be taken with them for that purpose. Some refuse attempting to take hold of either of the nipples of one person, who will readily catch at both the nipples of another: but when this happens, it is commonly the mother's breasts that are refused, and those of another person, who has been a nurse some time, that will be accepted; by which it may be reasonably concluded, that a child's objection to taking one or both of his mother's breasts may be owing to their not having been drawn before by a child; and that there is a particular flavour or something in the touch or feel that is communicated to the nipples by the sucking of one child, that induces another so readily to follow him; as the same dislike and refusal will frequently continue although the breasts have been repeatedly drawn by a grown person. Therefore when the child's refusal of one or both breasts continues some time, it will be advisable to get another child to draw them a few times.

This difficulty, which now and then happens, of getting a child to take the breast freely, sometimes

becomes a cause of uneasiness to the mother; and her anxiety and pains to accomplish it makes her hurry and fatigue herself more than, at this time, is consistent and advisable, and she needs do: for she may be satisfied that, although he may not at first readily take to the breast, yet there can be little doubt that he will take it in a little time: she may also be assured, that if he will take one breast, he will be brought to take the other, although he refuses it for the present; and she must not give it up, but have the breast drawn, two, or three times a day, to preserve the suck in it, which might otherwise go away. And she may likewise be as well assured, that although the child for some time persists in refusing both her breasts, yet if he will suck those of another person, he will as certainly be brought to take hers when they have been properly drawn by a grown person, or, particularly, by another child, as above mentioned. These difficulties occur most frequently of the first child, and gradually lessen on future occasions.

Among the number of causes, that of a want of milk or where there is but little, is not, when it happens, the least frequent; as a child will seldom take much pains when the reward of his labour is trifling and unsatisfactory.—If a child is put to the breast the first or second day, he may not, if he is a weak child, have strength enough to suck, especially if the nipples and breasts be unfavourable, and which

they very frequently are until they have been once or twice drawn.—Some children seem, without any apparent cause, naturaliy disposed to suck much better than others. It might be supposed, as sucking is the most particularly instinctive action of any we are capable of, and so essential at that age, that few or no children would be defective in it; yet some are very shy about beginning, and are never very perfect at it. A case fell under my observation of a child, who in every respect was perfectly formed, and was remarkably stout and healthy, who never shewed the least inclination or disposition to suck, notwithstanding every means that could be thought of, to induce him to it, was tried.

DIET OF CHILDREN AT MORE ADVANCED PERIODS.

When a child is weaned, or dry-nursed, it will be proper to confine him chiefly to his milk, or milk and bread, agreeable to the directions given in the former part of this work; and whatever changes of diet are made afterward, should be, at first, trifling and gradual. There is nothing in general more acceptable and better suited to a child at this time, than a little boiled floury potatoe; just softened with milk; without salt or butter; once or twice a day; and which may be repeated or increased as it is found to agree with the stomach and bowels.

A little broth may be given at dinner time occasionally. It should be thin and without salt: and the more it resembles the veal tea, (page 48) the better: it should always be made of fresh lean meat, without bones, skin, fat, or any thing that may make it greasy; nor should it have turnips or any fresh vegetables boiled in it. It may be given with or without bread in it, as appears most acceptable to the child. Vegetables in general must be sparingly used in the earlier periods of childhood; and should be confined to potatoes, of which a child may daily partake with freedom in all periods of childhood. The potatoe is light upon the stomach, easy of digestion, and not disposed to promote acidity: and therefore becomes the most acceptable to a weak stomach of any vegetable in common use: being much more so than bread, with which it is nearly equally nutritious. It forms of itself a meal, at once palatable and wholesome; as we observe in many parts of this and a neighbouring kingdom, where families, children especially, are chiefly sustained by it in good health, nearly the year about. The quality of the potatoe must be attended to; it must always be of the floury kind, and such as is produced from a light, dry, or sandy soil. The value of this vegetable is yet but partially understood. As an article of food for children, it cannot be surpassed; and it is generally liked by them.

If this mode of feeding is strictly adopted, a child will generally thrive and get forward in a very desirable manner, free from those complaints of the stomach and bowels which children are liable to at this period. Care is requisite on the part of the parent or governess to *see* that nurses or servants do not deviate, which they are very liable to do from negligence or conceitedness. It may be continued for the first twelve, eighteen or twenty-four months, without variation; or even much longer; as I know of no period of childhood that requires any deviation from this plan, that can be attended with any advantage, as herein is contained every thing in a plain simple state, that can be requisite and adapted to the growth, strength, and vigour of the child; and all others are avoided that might retard or diminish them.

It is not unusual about the second or third year, to indulge a child with a little of what may be at the table of the parents or servants. This should be permitted, both now and hereafter, with great caution; as it seldom happens any thing there is suited to the child, who is better confined to his nursery and diet.

Puddings, of bread, millet and rice, with eggs and milk, without sugar or butter, may be given as they are found to agree with the stomach and bowels. Sugar, butter, and salt, must form no part of

the diet in any shape; and must be completely prohibited at all periods of childhood; and the farther the prohibition can be extended to youth, the better. There may appear a hardship in depriving a child of articles that make food so pleasant and acceptable: there certainly would, were we to draw the conclusion from ourselves: the reverse, however, will be the case, when we make the experiment; as children, who have never been accustomed to these habits, will seldom be gratified by them, but rather show an indifference, which will often continue through youth and even manhood, with evident advantage.

All the disadvantages in the use of sugar which have been enumerated in the former part of this work, as applied to infants, (page 54) still continue in childhood; acidity, indigestion, a vitiated appetite, and their several consequences, are sure to follow, in proportion to its use.

Butter, as it is variously used, is proved by regular experience to every observer, to be hurtful to children. It is difficult of digestion in any weak stomach, and renders every thing so with which it is taken: it turns rancid, and is very heating; particularly so in toast, baked puddings, pastry; and cakes, or where heat is used; the bad consequences, therefore, arising from sugar and butter, are indi-

gestion, obstructions in the stomach and bowels, feverishness, paleness, weakness, want of thriving, delicacy, and depravity of appetite, enlargement of the belly, worms, and other concurring appearances to be observed in delicate and weakly children.

It may seem odd, that the two things which children appear most fond of (sugar and butter) should be of all others, they get, the most injurious: but it must be acknowledged they are not naturally so fond, but become so by habit; for if a child from his birth is not permitted to taste these forbidden fruits, he will be preserved from their deleterious effects without the smallest consciousness of their want, or a desire to have them. Experience, with those, who, out of a due regard to the present and future health and well-being of their offspring, will make it, will be convinced of the justness of the practice here recommended by the comparative benefits attending it. There are, some, however, who from a timorous, mistaken indulgence, cannot assume resolution sufficient to do what even their reason assents to.—Such a want of resolution is oftentimes more to be deplored than assisted.—It is evident, therefore, that every article of the diet, in which sugar or butter form a part, ought to be rejected at all periods of childhood.

Dumplings, and hard puddings of all sorts, are better avoided.

Salt, as it creates thirst, and vitiates the apptetie, is to be avoided; the more especially as it can be of no advantage, and is seldom relished at this period.

Fresh vegetables should be cautiously used, especially the more flatulent and griping; as cabbage, greens, peas, beans, and sallads; kidney bean, artichoke, and asparagus, are more proper, occasionally; but the place of all these will still be in general best supplied by, that wholesome vegetable, the potatoe; as abovementioned.

Milk, therefore, unboiled, or boiled with bread not too fine, and free from adulteration of alum, or the different preparations of milk in the form of custards and puddings, above described, broth and potatoes, should compose the diet of a child for some of the first years of his life, with as little variation as possible; with which he will thrive much better than any other, and is applicable to every constitution, being so well adapted to the stomach and bowels, and the nutrition of the body.

A child can seldom be thirsty with this diet, when well, and except from exercise in warm weather: if he should, milk, water, or milk and water will be most suitable. New milk should on all occasions, whether as food or drink, be thinned with water in proportion to its richness.

Regular meals, as far as they can be adopted, are to be preferred: for if a child is suffered to eat at irregular periods, and as his fancy directs, he will be induced to eat too much. He will also get a habit of eating as an amusement, which, if not indulged in, will make him fretful. As a child's diet is lighter, and his digestion quicker than those of a grown person, so he ought to have his meals somewhat more frequent. He may, in a general way, be allowed to eat as much as he will at a meal, supposing he is well, and his food is of a proper quality; as he will seldom be found to suffer any inconvenience from satisfying his appetite, even at night.

At the age of three, four, or more years, a child may at dinner have a little flesh meat or fowl, simply roasted or boiled, or fish of any kind, without butter, gravy, or any sauce, with potatoes: the white meats and fish, no doubt, will have the preference; and will be better boiled than otherwise. Some sorts of shell fish are often acceptable to children at this or a later period, and are very suitable; particularly oysters, which are best raw, and cockles, shrimps, and prawns; muscles, lobsters, and crabs, often disagree. As drink will be necessary now, it should invariably be milk, or water; but rather the pure simple element. Beer of any kind should never be tasted at any period of childhood, as it has an invariable and powerful tendency to promote acidity and all its consequences; and can

in no wise be necessary, or have any good tendency. It will be evident, therefore, that vinegar, pickles, and acids in all shapes, must undergo a strict prohibition.

It is very usual to give a glass, or part of a glass of wine, to a child at dinner; being considered as conducive to his strength and thriving: yet as wine, of all sorts, has, at this time, a tendency to promote acidity, its effect must obviously be the reverse of what was intended. If it be given as a cordial, to warm the stomach and cheer the spirits, it is to be considered, that youth requires not such aid: for although "wine is the milk of old age," it is not so of childhood, where the frame, like the mettle of all young animals, requires the rein rather than the spur; and if a child be puny and weak, he will sooner have his health improved by the diet here recommended. Wine, also, vitiates the appetite; and is an indulgence, introduced at much too early a period.—*Therefore better totally omitted.*

Cheese, is an article of food that most children soon get fond of; and when taken moderately, is rarely found to disagree. It seems less suited to form a full meal or part of a full meal, than to be taken in small quantities, with bread, between the regular meals. The newer sorts of cheese appear to agree better than those that are old.

Fruit is an article that requires a great deal of caution in its use. If properly selected, and given in moderate quantities, it is a gratification that may be indulged, as a child grows older especially, without injury, and perhaps occasionally to some advantage. In general, the sweet juicy, or mellow fruits that readily dissolve in the mouth, are the only ones that should be eaten; as the strawberry, ripe gooseberry, and black and white currants without the skins, sweet ripe grapes, and pears; while the more harsh and solid, as apples, cherries, plumbs, and the generality of stone fruits should be forbidden. The harshness and acidity of fruit lie most in the skin; the skin of all fruit therefore should be as carefully avoided as may be. The use of fruit may be best determined by its effects; if it produce no sickness, griping, costiveness or looseness, and the appetite for proper food is not impaired, its guarded use may be continued; otherwise not.

Fruits preserved with sugar, are very improper; not only from the sugar which they contain, but as they are generally kept some time before they are used, they acquire a tendency to ferment; and, when eaten, will be apt to produce more acidity than the fruit in its ripe unprepared state would do; and which is still more promoted by the skins, which are commonly preserved with the fruit. Fruit pies, compose no inconsiderable part of children's diet; however, if any part of this our plan

is assented to or adopted, it will be very evident they can form but a very small share now. Baking may seem to meliorate fruit when mixed with sugar, with the addition of buttered crust; yet that is chiefly a delusion of the palate; and such a composition certainly makes one of the most unsuitable articles in a child's diet. When pies are made of fresh fruit, it is often unripe and of the harshest kind. Apples, are in general too harsh for a weak stomach subject to acidity, even of a grown person: they are mellowed by keeping; and such as will bear keeping till after Christmas, may be eaten with the most safety.*—Fruit puddings, are to be objected to much on the same ground with pies.

As children in the summer and autumn may be indulged in as much ripe fruit as is proper, there is less occasion for its use in pies or puddings at these or other seasons; and, in winter, something else may be substituted. Foreign *dried* fruits, as French plumbs, figs, raisins, and currants, may occasionally be taken, raw or differently prepared. Also grapes. These are better suited to children than our own prepared fruits, as they are mellower and more free from acidity; and when made into puddings or pies, require little or no sugar. If any deviation can be made from our general plan, it will be in pies and puddings (chiefly the latter) of foreign dried fruits,

*These observations seem chiefly to apply to the fruits and the climate of Great Britain.

with little or no sugar, and with as little butter or suet, as may be, in the crusts.

Tea is better avoided: for if the tea in itself should possess no noxious quality, yet from being made sweet, it will vitiate the taste and take off the proper relish of other food; and if a child is suffered to have it in company, if he does not partake of buttered toast, &c. like the rest, he becomes dissatisfied and fretful. A little very weak common tea without sugar, put into a good deal of milk, with a piece of dry bread, is perhaps the only manner of taking it that ought to be permitted. Many are committed by servants in this matter; of whom, errors few can be trusted, even when the strictest orders are given them, as they are universally liable to give the tea very strong and sweet, with great quantities of butter in toast, &c. The commoner teas are to be preferred to the finer.

About this time, or even earlier, as it may be presumed to agree, a child may have buttermilk, which commonly proves very acceptable. It may be indulged in as a meal, with bread, or as drink at meals or otherwise, as it is found to agree; which it generally does very well with children who are deprived of the other acescent articles of diet abovenamed. It can never disagree, except by producing griping with looseness or costiveness. Some bowels may

be so weak as not to bear it, (yet that is not often the case) and then it should be discontinued. It is considered in some parts of the kingdom as unfit food for the human species; which is a very improper prejudice; as where it agrees, it forms one of the wholesomest articles of a child's diet; and agrees better with children than grown persons. It should always be used as fresh as possible, and never after it is turned sour. The Irish method of mixing it with potatoes, seems very acceptable and proper.

As a child grows older and uses more exercise, he may have larger portions of animal food or fish, at dinner only; and may have the daily number of his meals reduced to three: but as from the exercise he uses, he will be hungry between the meals, his hunger must be satisfied; and which is best done by as much dry bread as he will eat. There cannot be a pleasanter sight of the kind, than a child eagerly engaged with a large slice of a loaf; as it is an almost sure test of health, and which all children will do whose appetites are not pampered, depraved, and vitiated by improper diet.

If a child takes a liking to a little fat with the meat, it may very properly be given; as it does not appear from experience to produce grossness of habit more than the lean part of the meat. As puny

children, who are indulged in sweet and improper food, have no great relish for animal food, they have still less for the fat part of it; while those who are not so indulged, often prefer a little of it; and there doing so is one of the best indications of health. The fat of meat does not possess the injurious qualities of butter.

It is difficult to say when or how this diet is hereafter to be varied, as it ought to be continued with as little variation as possible during the whole of childhood; and the more invariably it is extended to youth, and even mature age, the better; for when innovations are once permitted, it is often a difficult matter to limit their boundaries; and which I do not feel myself disposed to enter upon here, as it would be extending the limits prescribed: confident, however, that a regulation of the diet at the varying periods of life, is of the first importance in the establishment and preservation of health.

The outline which has been given of a child's diet, must be left to be filled up at discretion, and as circumstances will allow. I am satisfied it is correct for the purpose of health, strength, and vivacity, at this period; and that it will have a powerful tendency to promote them through life, with both sexes; the difference of sex requiring no variation at these periods in the *quality* of their food, although the

female will commonly be found to require less in *quantity* than the male.

It is not usual to recommend animal food to children at an early period; who indeed are not much inclined to it, when they are indulged in butter, cakes, and sweet things; yet when introduced as above-mentioned, may be taken with propriety and advantage, and will be generally well relished. In a former part of this work, (page 32) the digestion of the food and its effects are familiarly explained; whereby it is found, that we are by nature formed to subsist upon a mixture of animal and vegetable food; and (as there observed) milk, as being a combination of animal and vegetable matter, is properly suited to the first period of infancy; yet as we become older, we use more exercise, the body becomes stronger, and we require more of the animal quality than milk affords, to support the increasing growth and strength; and which cannot be more advantageously obtained, than by a suitable mixture of animal and vegetable food, upon the principle above described. The *quantity* of animal food to be given, must vary with circumstances, and cannot be here pointed out in every particular case: it is sufficient to observe, that as the animal is the most nutritive part of the food, a lusty gross child must be restrained in proportion to his disposition to become gross, even to limiting him to milk alone; while a child, inclining to be thin and

spare, may have it proportionally increased. It is a very mistaken opinion, that animal food is improper for children inclined to be thin, weak, and delicate; and they are accordingly fed with fruit pies, cakes, and sweet things, which, as palling the appetite, and not affording sufficient and proper nourishment, beside injuring the stomach and bowels, contribute to their weakness and delicacy. Vegetables yield very little nourishment in proportion with animal food.

A child, as above-mentioned, who has been accustomed to cakes and sweet things, will not sometimes relish animal food, when it may become necessary to give it in changing his diet; yet a tolerably strict confinement to milk, bread, and potatoes, for a while, will bring it about. Instances may occur where animal food, in broth or any other shape, may be disliked, or disagree for a very long period; in those cases, the milk, &c. here mentioned, must be persevered in, while such distaste or disagreement continues.

Finally; it is to be observed, that in the foregoing general directions for a child's diet, it is supposed the child is not labouring under the effects of any hereditary, constitutional or other particular infirmity or disease, that may solicit a deviation; and which can rarely happen to any material extent, for any length of time.

NOTE.—In a former part of this essay, the period for applying the child to the breast, after delivery, is fixed at twenty-four or forty-eight hours ;—but, as a general rule, it is best to put the child to the breast as soon as the mother is refreshed, say in twelve hours.

INSTRUCTIONS

FOR

VACCINE INOCULATION,

COMMONLY CALLED

VACCINATION.

VACCINE INOCULATION,

Effectually prevents the small pox, is never dangerous, requires no particular diet nor medicine, and may be practised at all ages and at every season of the year.

TO COLLECT THE VACCINE MATTER.

The matter may be taken from a pustule that is making its progress regularly, and which possesses the true vaccine character, by puncturing with a lancet in several points, and charging small square pieces of glass with it, by gently pressing them on the opened puncture, and putting two of them together, with the sides containing the matter in contact; wrap them up in a piece of paper, and preserve them from heat and moisture.

The best time for taking the vaccine matter is from the seventh to the ninth day, before the efflorescence or red appearance takes place. An unnecessary irritation of the pustule is thereby avoided: and it is also advisable not to take a great deal of fluid from one pustule.

Or, the internal, central part of the first scab that falls off, which is the true vaccine scab, may be used.

The scab of a vigorous pustule should be chosen, and may be kept in a cool dry place for a twelve month: so that vaccination may be performed from it at any time.

TO INTRODUCE THE MATTER.

The proper place for introducing the matter is on the arm, about midway between the shoulder and the elbow. The mode of doing it is by impregnating the point of a clean sharp lancet with the matter, and inserting it by means of a very slight scratch or small puncture, and wiping the point of the lancet on the part where the blood is drawn. Fluid matter taken from a pustule and immediately inserted is the most certain. But to use the matter on the glasses, we restore it to a fluid state, by dissolving it in a small portion of cold water taken upon the point of a lancet; and to use the scab, we scrape off some of the dark, internal, central part, and mix it with a little cold water on a piece of glass.

SIGNS OF TRUE VACCINE INOCULATION.

A little red spot will appear on the punctured part on the third day, which, on the fourth or fifth

day, becomes a watery or vesicated pimple: It goes on increasing, with a depression in the middle of the pustule, until the ninth or tenth day, when it is generally surrounded by a rose coloured, circumscribed appearance or efflorescense, which remains nearly stationary for a day or two.

The efflorescence then fades away and the pustule gradually becomes, a hard glossy scab, of a dark mahogany colour. This efflorescence is also called the areola, and the vaccine ring, from its being circumscribed. It is most commonly in size rather larger than a dollar.

These progressive stages of the pustule are commonly completed in sixteen or seventeen days. One pustule only is produced. On the eighth or ninth day, when the efflorescence is forming, some fever often occurs in children, and lassitude in adults.

SIGNS OF UNSUCCESSFUL VACCINE INOCULATION.

The most frequent deviation from the perfect pustule, is that which finishes its progress much within the time limited by the true.

Its commencement is marked by a troublesome itching; and it forms a premature efflorescence,

sometimes extensive, but seldom circumscribed or of so vivid a tint as that which surrounds the complete pustule; and it exhibits one peculiar characteristic mark of degeneracy, by appearing more like a common festering, produced by any small extraneous body sticking in the skin, than a pustule excited, as before described by the vaccine virus. The successful progress of the vaccine pustule is frequently rendered uncertain by being rubbed.

An attention to the progress of the true vaccine inoculation, impresses on the mind of a practitioner the perfect character of a vaccine pustule. Therefore, when a deviation of any kind arises, common prudence points out the necessity of re-inoculation with vaccine virus of the most active kind, and, if possible, taken fresh from the pustule

CAUTIONS RESPECTING THE VACCINATED PART.

To preserve the patient from suffering inconvenience in the vaccinated part, it is necessary that it should not be rubbed; that it should be entirely loose and exposed to the air, and during the time of the efflorescence, should be constantly dusted with rye or buckwheat meal. The arms of adults are often inflamed from their wearing tight clothes, or using too much exercise at the period of the infla-

mation's taking place—this might easily be prevented by avoiding the cause.

If the pustule is rubbed and becomes a sore, the part should be covered with Goulard's cerate, or a salve composed of sweet oil and bees-wax melted together, spread on a piece of clean linen rag, and kept in its place by a piece of soft linen sewed round the arm; the same application should be made if any sore remains after the scab has dropped off.

SMALL POX DESTROYS,

VACCINATION SAVES,

THE LIVES OF THOUSANDS.

The following facts are chiefly extracted from a late work published in London in favour of Vaccination; they are submitted to the serious consideration of every person, who may think the preservation of human life an object worthy of attention.

The Small Pox we are informed from the best authorities, destroys, annually, in Great Britain alone, between forty and fifty thousand lives; or, throughout the habitable globe, twenty millions of people, exclusive of those who perish from the enfeebled state of the system, produced by this formidable disease.

Some tolerable idea may be formed of the ravages committed by the Small Pox, by examining the bills of mortality; for in London, where the climate is temperate, the disease well known, and the treatment of the sick very ably conducted, two or three thousand persons, according to Baron Dimsdale, annually perish.

So great was the epidemic rage of the Small Pox at Paris, in 1723, says Voltaire, that upwards of twenty thousand persons perished by it in that city alone.

In 1768, the Abbé Chappe informs us, that this same scourge destroyed at Naples sixteen thousand persons in a few weeks. In Russia, the annual destruction of human beings thereby, is estimated by Baron Dimsdale at two millions.

In China, says Dr. Clark, where the population is immense, the number who annually die of the Small Pox, the most loathsome of all diseases next to the leprosy, is incalculable.

The fatality is still more remarkable amongst uncivilized people, who are wholly ignorant of the means of prevention, and of the methods of cure.

About fifty years after the discovery of Peru, the Small Pox was carried from Europe to America, by way of Carthagena, when it overran the continent of the New World, and destroyed upwards of one hundred thousand Indians, in the single province of Quito. This account was found by M. de la Condamine in an ancient manuscript preserved in the cathedral of that city.

This author also observes, that in the Portuguese settlements, bordering upon the river of the Ama-

zons, the Small Pox proved fatal to nearly all the natives.

Mackenzie in his travels over the continent of North America, gives an affecting account of the destruction occasioned amongst the Indians by the Small Pox. The fatal infection, says he, spread around with a baneful rapidity, which no flight could escape, and with a fatal effect that nothing could resist. It destroyed with its pestilential breath whole families and tribes, and the horrid scene presented to those who had the melancholy and afflicting opportunity of beholding it, a combination of the dead, the dying, and of such as to avoid the horrid fate of their friends around them, prepared to disappoint the plague of its prey, by terminating their own existence.

In 1767, as we are informed in Cook's Voyage, a soldier introduced the Small Pox for the first time into Kamtschatka, and twenty thousand persons perished by that disease, leaving whole villages nearly desolate.

Crantz in his history of Greenland says, that the Small Pox was first introduced into that frozen region in 1733, when the mortality of this disease was so great, that it almost depopulated the whole country.

Even so late as the year 1793, when the Small Pox was conveyed to the Isle of France in the East Indies, by a Dutch ship, five thousand four hun-hundred persons perished there with this distemper in six weeks.

From the above statement, it is evident, that all the wars throughout the whole world, have never destroyed so many lives as have been cut off by this awful scourge.

To lessen in some degree this destruction of the human race, inoculation was introduced, by which the mortality of the disease was obviated, as far as it respected those who submitted to the operation.

But as the benefit of inoculation cannot be extended to society, as is observed by a popular writer, by any other means than by making the practice general: while it is confined to a few it must prove hurtful to the whole. By means of it the contagion is spread and is communicated to many, who might otherwise have never had the disease. Accordingly, it is found that more persons die of the Small Pox now, than before inoculation was introduced: and this important discovery, by which alone more lives might be saved than by all the other endeavours of the faculty, is in a great measure lost by its benefit not being extended to the whole community. Dr. Heberden in his observations on the in-

crease and decrease of different diseases observes, that he examined carefully the bills of mortality, and comparing the destruction occasioned by the Small Pox in Great Britain before and since inoculation, *reluctantly was brought to this melancholy conclusion, that at the present period, the proportional increase of deaths from this disease was as five to four.*

Hence it would appear, that inoculation has done a great injury to society at large, and the difficulty of extending it generally so as to convert it truly into a public benefit, is attended with almost insuperable objections. For to make a law, that inoculation shall be general and periodical, appears both cruel and arbitrary, where security of life cannot be given to all; and is what no government, grounded on the basis of general liberty, would venture to adopt.

But through the kindness of Divine Providence, the means of obviating all these difficulties and dangers, have at length been placed within our power, by the invaluable discovery made public by Dr. Edward Jenner, that the *Cow Pock which has* never *been known to prove fatal, effectually secures the constitution from the attacks of either the natural or inoculated Small Pox.*

The following annual statement of deaths by the Small Pox within the London bills of mortality, in

the present century, has lately been published by the Jennerian Society of that city,

A. D.	1800	2409 deaths,
	1801	1461
	1802	1579
	1803	1173
	1804	622

As the society remarks, it is hoped the knowledge of these facts will be strongly promotive of the beneficial practice of Vaccine inoculation; it appearing that the fatal disease of Small Pox has progressively declined, as the inestimable discovery of Dr. Jenner has been introduced.

Vaccination was introduced into Vienna in 1801. Its effects in decreasing the deaths by Small Pox, are evident, from comparing the deaths since that period with those of the preceding years.

In	1800	835 died of Small Pox,
	1801	164
	1802	61
	1803	27
	1804	2 only.

A Comparative View of the Natural Small Pox, Inoculated Small Pox, and Vaccination, in their Effects on Individuals and Society.

NATURAL SMALL POX.

For twelve centuries this disorder has been known to continue its ravages, destroying every year an immense proportion of the population of the world.

It is in some few instances mild, but for the most part violent, painful, loathsome, dangerous to life, and always CONTAGIOUS.

One case in three dangerous, one in six dies.

At least half of mankind have it, consequently one in twelve of the human race perish by this disease. In London three thousand die annually, forty thousand in Great Britain and Ireland.

The eruptions are numerous, painful, and disgusting. Confinement, loss of time and expense are certain, and more or less considerable. Precautions are for the most part unavailing. Medical treatment necessary, both during the disease, and afterwards. It occasions pitts, scars, seams, &c. disfiguring the skin, particularly the face. The subsequent diseases are scrophula in its worst forms; diseases of the skin, glands, joints, &c. and loss of sense, sight or hearing frequently follow.

It is attempting to cross a large and rapid stream by swimming, when one in six perish.

INOCULATED SMALL POX.

For the most part mild, but sometimes violent, painful, loathsome and dangerous to life; always CONTAGIOUS, and therefore gives rise to the Natural Small Pox, and has actually, by spreading the disease, increased the general mortality seventeen in every thousand.

One in forty has a dangerous disease, one in three hundred dies. And in London, one in an hundred.

Eruptions are sometimes very considerable, confinement, loss of time, and expense certain, and more or less considerable; preparation by diet and medicine necessary, extremes of heat and cold dangerous: during ill health, teething and pregnancy to be avoided, medical treatment usually necessary. When the disease is severe, deformity probable, and subsequent disorders as in the Natural Small Pox.

It is passing the river in a boat subject to accidents, where one in three hundred perish, and one in forty suffer partially.

VACCINATION

Is an infallible preventive of the Small Pox, always mild, free from pain or danger, never fatal, not contagious.

No eruption but where Vaccinated. No confinement, loss of time, or expense necessary. No precaution, no medicine required, no consequent deformity. No subsequent disease.

It is passing over a safe bridge

Parents and others are earnestly requested to attend seriously to the preceding comparison, and to the following certificate and recommendation:

Philadelphia, April 12, 1803.

We the Subscribers, Physicians of Philadelphia, having carefully considered the nature and effects of the newly discovered means of preventing, by Vaccination, the fatal consequences of the Small Pox, think it a duty thus publicly to declare our opinion, that inoculation for the Kine or Cow Pock, is a certain preventative of the Small Pox; that it is attended with no danger, may be practised at all ages and seasons of the year, and we do therefore recommend it to general use.

John Redman,	Jno. Porter,	Wm. J. Jacobs,
W. Shippen,	Felix Pascalis,	John C. Otto,
A. Kuhn,	James Stewart,	Isaac Cathrall,
Saml. Duffield,	James Dunlap,	J. Reynolds,
Benj. Rush,	James Proudfit,	John Keemle,
Thomas Parke,	Ts. T. Hewson,	J. Church,
Benj. Say,	James Gallaher,	J. C. Rousseau,
Philip S. Physick,	Charles Caldwell,	Arthur Blayney,
C. Wistar, jun.	Thos. C. James,	Rene la Roche,
Saml. P. Griffitts,	Wm. P. Dewees,	Monges,
John R. Coxe,	Benj. S. Barton,	Elijah Griffiths,
Jas. Woodhouse,	Isaac Sermon,	William Budd,
Sam. F. Conover,	George Pfeiffer,	Geo. F. Alberti,
Pl. F. Glentworth	Jos. P. Minnick,	Joseph Pfeiffer,
E. Perkins,	Wm. Barnwell,	Joseph Strong,
Wm. Currie,	Adam Seybert,	Edward Cutbush.
M. Leib,	James Mease,	

Philadelphia, May 26, 1806.

N. Chapman, Peter Miller, Isaac Cleaver,
John S. Dorsey, Jos. Parrish, S. Bleight.
Wm. Shaw,

PHILADELPHIA DISPENSARY.

The attending and consulting Physicians having informed the Managers, "That they had, for these eighteen months past, inoculated for the Cow Pock, and found it mild, unattended with danger, and a full security against the Small Pox, and expressing their wishes that the superior advantages of the Cow Pock may be fully experienced by the objects of this charity."

Therefore, *Resolved*, That we do entirely accord with the sentiments of the Physicians; and earnestly recommend to the poor of the city, to embrace the means now offered of preserving themselves and families from a dangerous and loathsome disease, by the newly discovered and happy mode of inoculation for the Cow Pock; which will be daily performed by the Physicians at the Dispensary.

Published by Order of the Board of Managers,
WIILIAM WHITE, *President.*

April 25, 1803.

After a mature consideration of the preceding statement of facts and recommendations, we would venture to ask every person of reflection, WHETHER IT IS JUSTIFIABLE TO CONTINUE TO INOCULATE FOR THE SMALL POX?

FINIS.

(PEDIATRICS) - MOSS, William. An Essay on the Management and Feeding of Infants. 12mo, cont. cloth backed boards. Philadelphia, 1805.

FIRST AMERICAN EDITION. This book, first published in 1781, was written primarily for the laity. Moss devotes a large part of his essay to the feeding of infants, and on this subject he has more to say than a mere repetition of the usual generalisms and ancient traditions. He explains intelligently the why and wherefore of his directions. The book contains as an appendix: Instructions for Vaccine Inoculation, commonly called Vaccination, which is followed by a certificate and recommendation of vaccination as a certain preventive of the small pox, signed by the physicians of Philadelphia. Moss was surgeon to the Liverpool Lying-in Charity, and would seem to have been a public-spirited man, for when, in 1781, an Inoculation Society was founded in Liverpool, Mr. Moss was one of those who gave his services.